

FHWA-Indiana Environmental Document
CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM
GENERAL PROJECT INFORMATION

Road No./County:	United States (US) 50 at County Road (CR) 1225 E and CR 1250 E/Jackson County
Designation Number(s):	Des 1700162 and Des 1700161
Project Description/Termini:	Intersection improvement project along approximately 2,250 mile of US 50 from approximately 150 mile west of CR 1225 E to approximately 370 mile east of CR 1250 E

X	Categorical Exclusion, Level 2 – Required Signatories: INDOT DE and/or INDOT ESD
	Categorical Exclusion, Level 3 – Required Signatories: INDOT ESD
	Categorical Exclusion, Level 4 – Required Signatories: INDOT ESD and FHWA
	Environmental Assessment (EA) – Required Signatories: INDOT ESD and FHWA
	Additional Investigation (AI) – The proposed action included a design change from the original approved environmental document. Required Signatories must include the appropriate environmental approval authority

Approval

_____	_____
INDOT DE Signature and Date	INDOT ESD Signature and Date

FHWA Signature and Date	

Release for Public Involvement

	 2021.08.26 14:59:56 -04'00'	_____
	INDOT DE Initials and Date	INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date: _____

Name and Organization of CE/EA Preparer: _____ Christian Radcliff, SJCA Inc.

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Part I – Public Involvement

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

Does the project have a historic bridge processed under the Historic Bridges PA*?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If No, then: Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.*

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Notice of Entry letters were mailed to potentially affected property owners near the project area on January 7, 2019, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page 1.

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Public Involvement Manual* which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Discuss public controversy concerning community and/or natural resource impacts, including what is being done during the project to minimize impacts.

At this time, there is no substantial public controversy concerning impacts to the community or to natural resources.

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Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: INDOT INDOT District: Seymour

Local Name of the Facility: US 50; CR 1225 E; CR 1250 E

Funding Source (mark all that apply): Federal [X] State [X] Local [] Other* []

*If other is selected, please identify the funding source:

PURPOSE AND NEED:

The need should describe the specific transportation problem or deficiency that the project will address. The purpose should describe the goal or objective of the project. The solution to the traffic problem should NOT be discussed in this section.

Need:

The need for this project is due to the mobility and safety issues on the existing US 50 roadway at the intersections of CR 1225 E and CR 1250 E. The existing US 50 roadway provides two (2) 12-foot wide travel lanes, one in each direction, with shoulders that are three (3) feet wide on the north and south sides of the roadway. Traffic on US 50 must use the existing through lanes for not only through movements, but also for turning movements on CR 1225 E, CR 1250 E, and the other drives located on the north side of the roadway. US 50 is a rural principal arterial roadway that carries approximately 11,857 vehicles per day (2019) and has a legal posted speed limit of 55 mph. Traffic amounts are projected to increase to approximately 14,786 in the design year of 2044 with an expected truck percentage of 14.29%. The formation of queue lines on US 50 due to the lack of a route for traffic to flow past motorists turning left into the apartment complex, CR 1250 E, or CR 1225 E poses a risk for crashes. The intersection of US 50 and CR 1225 E experienced nine (9) crashes between 2013 and 2015, which is lower than expected for this intersection. However, the intersection of US 50 and CR 1250 E experienced eleven (11) crashes between 2013 and 2015, which is higher than expected for this intersection.

Purpose:

The purpose of this project is to improve mobility on US 50 at the intersection with CR 1225 E and to improve the safety of the intersection of US 50 and CR 1250 E.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Jackson Municipality: N/A

Limits of Proposed Work: Along approximately 2,250 feet of US 50 from approximately 150 feet west of CR 1225 E to 370 feet east of CR 1250 E

Total Work Length: 0.37 Mile(s) Total Work Area: 3.11 Acre(s)

Is an Interstate Access Document (IAD)1 required?

If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?

Yes1 [] No [X] Date: []

1If an IAD is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IAD.

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Describe location of project including township, range, city, county, roads, etc. Existing conditions should include current conditions, current deficiencies, roadway description, surrounding features, etc. Preferred alternative should include the scope of work, anticipated impacts, and how the project will meet the Purpose and Need. Logical termini and independent utility also need discussed.

Location:

This project is located in Section 13, Township 6 N, Range 6 E, east of Seymour in Jackson County, Indiana. The project occurs along approximately 2,250 feet of US 50, from approximately 150 feet west of CR 1225 E to approximately 370 feet east of CR 1250 E. Project graphics, including a project location map, aerial map, and US Geological Survey (USGS) topographic map, are in Appendix B, pages 1 to 4.

The proposed scope of work will occur under two designation (Des.) numbers, 1700162 (lead Des) and 1700161. However, project plans show the work to be completed under both Des numbers, and is included in Appendix B, pages 11 to 19.

Existing Conditions:

US 50 is considered a Rural Principal Arterial in the project area and provides two (2) 12-foot wide travel lanes and 3-foot wide paved shoulders. CR 1225 E intersects with US 50 from the south approximately 150 feet east of the western project terminus and provides two (2) paved travel lanes. CR 1250 E intersects with US 50 from the north approximately 370 feet west of the eastern project terminus and provides two (2) 12-foot wide paved travel lanes. There are various drainage pipes that carry drainage under residential drives and a field entrance, and a 4-foot by 3-foot reinforced concrete box culvert within the project area. No guardrails are present in the project area. Traffic on US 50 must use the existing through lanes for not only through movements, but also for turning movements on CR 1225 E, CR 1250 E, and the other drives located on the north side of the roadway.

Land use in the vicinity of the project is primarily agricultural, with the apartment complex and a commercial business present on the north side of US 50. There are various residences present on the south side of US 50 as well. A small portion of the Muscatatuck National Wildlife Refuge is present on the south side of US 50. Existing electric and communication utility lines are present on the north side of the roadway.

Preferred Alternative:

The preferred alternative for this project is to widen the existing roadway to the north to accommodate left turn lanes from US 50 to CR 1225 E and CR 1250 E. A two-way left turn lane will be constructed at CR 1225 E and US 50. A dedicated left turn lane will be constructed at the intersection of CR 1250 E and US 50. The two drives for the commercial business and the apartment complex near CR 1225 E will be consolidated to restrict access and reduce conflict points on US 50. New guardrail will be installed to protect a 4-foot by 3-foot box culvert, which will not be impacted.

The preferred alternative was adjusted to only include construction on the north side of the roadway to avoid impacts to the Muscatatuck National Wildlife Refuge on the south side of US 50. Minor tree clearing will be required around this culvert. Mitigation for impacts from this project are not necessary. Traffic will be maintained through the use of lane restrictions and shifting traffic away from the construction area. Please refer to the Maintenance of Traffic section of this document and the project plans (Appendix B, pages 14 to 15).

Various utilities on the north side of US 50 will require relocation to widen the roadway and grade the ditches. These include electric and communications lines. Temporary interruptions are expected; however, no permanent disruptions to utilities will occur.

This alternative meets the purpose and need of the project by improving mobility at the intersection of CR 1225 E and US 50 and improving the safety of the intersection of US 50 and CR 1250 E.

Logical Termini/Independent Utility:

The termini of this project were chosen to allow enough space to taper the existing US 50 lanes east and west of the project area to tie into the proposed widened roadway; therefore, it has logical termini. This project was designed to tie into the existing US 50 roadway and does not require any other project to be constructed; therefore, it has independent utility.

OTHER ALTERNATIVES CONSIDERED:

Provide a header for each alternative. Describe all discarded alternatives, including the No Build Alternative. Explain why each discarded alternative was not selected. Make sure to state how each alternative meets or does not meet the Purpose and Need and why.

No Build

This alternative is the No Build alternative. While doing nothing is possible, it does not address the purpose and need of the project. If this alternative is selected, the queuing will continue at this section of US 50, posing the potential for crashes to occur. This alternative does not address the purpose and need of the project because it does not improve mobility at US 50 and CR 1225 E and

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it does not improve safety at US 50 and CR 1250 E. Therefore, it was dismissed from further consideration.

Widen US 50 to the South and add a 12-foot Passing Blister

This alternative would widen US 50 to the south and would add a 12-foot passing blister at CR 1225 E and at CR 1250 E. Adding a passing blister would facilitate mobility at these intersections and would reduce the risk of crashes. The two drives on the north side of US 50 would be consolidated to one shared drive which would limit access to US 50. This alternative would require more right of way (ROW) parcels to be acquired, would disturb more utilities, and resurfacing of the entire road would be required. ROW would be required from the Muscatatuck National Wildlife Refuge, which would be a Section 4(f) impact (See the Section 4(f) section in this document). This alternative addresses the purpose and need of the project by improving mobility at the intersection of US 50 and CR 1225 E and improving safety at the intersection of US 50 and CR 1250 E, but it would require additional ROW, additional utility relocation costs, and would impact a Section 4(f) resource. Therefore, it was dismissed from further consideration.

The No Build Alternative is not feasible, prudent or practicable because *(Mark all that apply)*

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe):

X

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ROADWAY CHARACTER:

If the proposed action includes multiple roadways, complete and duplicate for each roadway.

US 50

Name of Roadway US 50
 Functional Classification: Rural Principal Arterial
 Current ADT: 11,857 VPD (2019) Design Year ADT: 14,786 VPD (2044)
 Design Hour Volume (DHV): 1,332 Truck Percentage (%) 14.29%
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Paved Travel Lanes		Paved Travel Lanes	
Pavement Width:	30	ft.	30 – 50.5	ft.
Shoulder Width:	3 north 3 south	ft.	8 – 11.5 north 3 south	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

CR 1225 E

Name of Roadway CR 1225 E
 Functional Classification: Local Road
 Current ADT: N/A VPD (2019) Design Year ADT: N/A VPD (2044)
 Design Hour Volume (DHV): N/A Truck Percentage (%) N/A
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Paved Travel Lanes		Paved Travel Lanes	
Pavement Width:	20	ft.	20	ft.
Shoulder Width:	0	ft.	0	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

CR 1250 E

Name of Roadway CR 1250 E
 Functional Classification: N/A
 Current ADT: N/A VPD (20XX) Design Year ADT: N/A VPD (20XX)
 Design Hour Volume (DHV): N/A Truck Percentage (%) N/A
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Paved Travel Lanes		Paved Travel Lanes	
Pavement Width:	20	ft.	20	ft.
Shoulder Width:	0	ft.	0	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

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BRIDGES AND/OR SMALL STRUCTURE(S):

If the proposed action includes multiple structures, complete and duplicate for each bridge and/or small structure. Include both existing and proposed bridge(s) and/or small structure(s) in this section.

Structure/NBI Number(s): CV 050-036-107.22 Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Reinforced Concrete Box Culvert		Reinforced Concrete Box Culvert	
Number of Spans:	1		1	
Weight Restrictions:	NA	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	30	ft.	30	ft.
Outside to Outside Width:	100	ft.	100	ft.
Shoulder Width:	3 north 3 south	ft.	3 north 3 south	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

The 4-foot by 3-foot reinforced concrete box culvert west of the intersection of US 50 and CR 1250 E will not be impacted as a result of this project (see Appendix B, page 17). Three drainage culverts will be removed to accommodate the widened roadway. Two of these culverts carry drainage under the drive for the apartment complex on the north side of US 50 and are corrugated metal pipes. They are both 15 inches in diameter. The culvert at the west entrance is approximately 61 feet in length, and the culvert at the east entrance is approximately 72 feet in length. The third culvert is a reinforced concrete pipe that carries drainage under the field entrance approximately 140 feet west of the 4-foot by 3-foot reinforced concrete box culvert. This culvert is 15 inches in diameter and approximately 20 feet in length.

New drainage structures will be installed on the north side of US 50 after construction of the widened pavement. This will be done to ensure positive drainage from the roadway and the graded ditches. The new drainage structures are detailed in the table below.

Structure Number	Approximate Location	Length	Diameter	Appendix
STR. NO. 100	255.6 ft E of CR 1225 E	7 ft	12 in	B, page 16
STR. NO. 101	255.6 ft E of CR 1225 E	355 ft	12 in	B, page 16
STR. NO. 102	609.7 ft E of CR 1225 E	7 ft	12 in	B, page 17
STR. NO. 103	609.7 ft E of CR 1225 E	290 ft	12 in	B, page 17
STR. NO. 104	455.0 ft W of CR 1250 E	12 ft	12 in	B, page 17
STR. NO. 105	455.0 ft W of CR 1250 E	140 ft	12 in	B, page 17
STR. NO. 106	150.5 ft W of CR 1250 E	7 ft	12 in	B, page 17
STR. NO. 107	150.5 ft W of CR 1250 E	84 ft	12 in	B, page 17
STR. NO. 108	32.5 ft W of CR 1250 E	7 ft	12 in	B, page 17
STR. NO. 109	32.5 ft W of CR 1250 E	117 ft	12 in	B, page 17
STR. NO. 110	57.5 ft E of CR 1250 E	7 ft	12 in	B, page 17
STR. NO. 111	57.5 ft E of CR 1250 E	89 ft	12 in	B, page 17

No other bridges or structures are present within or adjacent to the project area.

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MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discuss closures and/or facilities (if any) that will be provided for maintenance of traffic. Any known impacts from these temporary measures should be quantified to the extent possible, particularly with respect to properties such as Section 4(f) resources and wetlands. Any local concerns about access and traffic flow should be detailed as well.

Traffic is anticipated to be maintained through the use of lane restrictions and shifting traffic away from the construction area. As one side of the widened roadway is constructed, traffic will be shifted to the existing roadway. Traffic will then be shifted to the new constructed side of the roadway while the other side of the road is constructed. Two (2) 11-foot wide travel lanes will be open at all times throughout construction while the widened roadway is constructed. Please refer to the project plans (Appendix B, pages 14 to 15) for additional information on the MOT plan.

The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 259,750 (2020) Right-of-Way: \$ 55,000 (2021) Construction: \$ 756,571 (2023)

Note: An administrative modification will be required to update the STIP cost to reflect updated project costs.

Anticipated Start Date of Construction: Fall 2022

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.52	0.12
Commercial	0.24	0.12
TOTAL	0.76	0.24

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition, reacquisition or easements, either known or suspected, and their impacts on the environmental analysis should be discussed.

Existing ROW widths vary within the project area. The narrowest width is approximately 30 feet from the centerline of the roadway of US 50, while the maximum ROW width in the project area is approximately 50 feet from the centerline of the roadway.

The project requires approximately 0.76 acre of permanent ROW. Approximately 0.52 acre will come from residential properties and approximately 0.24 acre will come from a commercial property. Proposed ROW widths following permanent ROW acquisition for this project will extend to approximately 45 feet to 55 feet north of the centerline of US 50. The project also requires approximately 0.24 acre of temporary ROW. Approximately 0.12 acre will come from residential properties and approximately 0.12 acre will come from a commercial property. It should be noted that some attached documents included in the appendices of this Categorical Exclusion (CE) document, including the Minor Projects Programmatic Agreement (MPPA) (Appendix D, page 1) and the RFI report (Appendix E, page 1), temporary ROW amounts were estimates and have since become outdated; the ROW amounts were adjusted during the design process. No additions to the temporary ROW were made after approval of these documents.

If the scope of work or permanent or temporary ROW amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

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Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A - EARLY COORDINATION:

List the date(s) coordination was sent and all resource agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received.

Early coordination letters were sent on January 21, 2020 (Appendix C, pages 1 to 2). The scope of the project was updated after the initial early coordination letter was sent; therefore, a second early coordination letter outlining the changes to the scope was sent on April 6, 2021 (Appendix C, pages 3 to 4).

Agency	Date Sent	Date Response Received	Appendix
Indiana Dept. of Environmental Management (IDEM)	January 21, 2020/April 6, 2021	January 21, 2020	Appendix C-6 to C-10
Indiana Geological & Water Survey (IGWS)	January 21, 2020/April 6, 2021	January 21, 2020	Appendix C-11 to C-13
Hoosier National Forest	January 21, 2020/April 6, 2021	January 22, 2020	Appendix C-14
U.S. Fish and Wildlife Service (USFWS)	January 21, 2020/April 6, 2021	February 4, 2020	Appendix C-15 to C-16
IDEM Office of Water Quality	January 21, 2020/April 6, 2021	February 4, 2020	Appendix C-17
Indiana Department of Natural Resources (IDNR)	January 21, 2020/April 6, 2021	February 20, 2020/April 8, 2021	Appendix C-18 to C-20
Natural Resources Conservation Service (NRCS)	January 21, 2020/April 6, 2021	April 22, 2021	Appendix C-21 to C-22
Federal Highway Administration (FHWA)	January 21, 2020/April 6, 2021	No Response Received	N/A
National Park Service (NPS)	January 21, 2020/April 6, 2021	No Response Received	N/A
U.S. Department of Housing & Urban Development (HUD)	January 21, 2020/April 6, 2021	No Response Received	N/A
INDOT Seymour District Environmental Team Lead	January 21, 2020/April 6, 2021	No Response Received	N/A
U.S. Army Corps of Engineers (USACE)	January 21, 2020/April 6, 2021	No Response Received	N/A
Jackson County Surveyor	January 21, 2020/April 6, 2021	No Response Received	N/A
Jackson County Floodplain Administrator	January 21, 2020/April 6, 2021	No Response Received	N/A
Jackson County Commissioners	January 21, 2020/April 6, 2021	No Response Received	N/A
Jackson County Highway Superintendent	January 21, 2020/April 6, 2021	No Response Received	N/A
Muscatatuck National Wildlife Refuge	January 21, 2020/April 6, 2021	No Response Received	N/A

Resource specific recommendations are included in the applicable sections of this CE document, and all applicable recommendations are included in the Environmental Commitments section of this CE document.

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SECTION B – ECOLOGICAL RESOURCES:
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Streams, Rivers, Watercourses & Other Jurisdictional Features

- Federal Wild and Scenic Rivers
- State Natural, Scenic or Recreational Rivers
- Nationwide Rivers Inventory (NRI) listed
- Outstanding Rivers List for Indiana
- Navigable Waterways

Presence

Impacts

Yes	No

Total stream(s) in project area: N/A Linear feet Total impacted stream(s): N/A Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Describe all streams, rivers, watercourses and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal or state lists for Indiana. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area (Appendix B, page 4), and the RFI report (Appendix E, page 8) there is one (1) stream mapped within the 0.5 mile search radius. It was determined that no streams, rivers, or other water courses are present within the project area during the site visit on October 13, 2020, by SJCA Inc. The stream feature that was mapped in the RFI report was determined to be an ephemeral feature that only carries water during heavy rain events. Water does not likely flow consistently enough there to develop a defined bed and bank, and water does not pool there long enough to develop wetland characteristics (Appendix F, page 4).

No Federal, Wild and Scenic Rivers; State Natural, Scenic, and Recreational Rivers; Outstanding Rivers for Indiana; navigable waterways or National Rivers Inventory waterways are present in the project area. Therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on January 7, 2021. Please refer to Appendix F, pages 1 to 37 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no jurisdictional streams, rivers, watercourses, or other jurisdictional features are within or adjacent to the project area. The USACE makes all final determinations regarding jurisdiction.

IDEM responded with their automated letter on January 21, 2020, the USFWS responded on February 4, 2020, and IDNR responded on February 20, 2020. No agencies responded to the early coordination letter with recommendations about jurisdictional streams that are applicable to this project. All applicable recommendations are included in the Environmental Commitments section of this CE document.

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Open Water Feature(s)	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Reservoirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farm Ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retention/Detention Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm Water Management Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe all open water feature(s) identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area (Appendix B, page 4), and the RFI report (Appendix E, page 8) there are no open water features within the 0.5 mile search radius. That was confirmed by the site visit on October 13, 2020, by SJCA Inc. No open water features are present within or adjacent to the project area, therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on January 7, 2021. Please refer to Appendix F, pages 1 to 37 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no open water features are within or adjacent to the project area. The USACE makes all final determinations regarding jurisdiction.

IDEM responded with their automated letter on January 21, 2020, the USFWS responded on February 4, 2020, and the IDNR responded on February 20, 2020. No agencies responded to the early coordination letter with recommendations about open water features that are applicable to this project. All applicable recommendations are included in the Environmental Commitments section of this CE document.

Wetlands	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Total wetland area: N/A Acre(s) Total wetland area impacted: N/A Acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e. location, likely Water of the US, appendix reference)
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Wetlands (Mark all that apply)	<u>Documentation</u>	<u>ESD Approval Dates</u>
Wetland Determination	<input checked="" type="checkbox"/>	January 7, 2021
Wetland Delineation	<input type="checkbox"/>	
USACE Isolated Waters Determination	<input type="checkbox"/>	

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

- Substantial adverse impacts to adjacent homes, business or other improved properties;
- Substantially increased project costs;
- Unique engineering, traffic, maintenance, or safety problems;
- Substantial adverse social, economic, or environmental impacts, or
- The project not meeting the identified needs.

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Describe all wetlands identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area (Appendix B, page 4), and the RFI report (Appendix E, page 8) there are no wetlands within the 0.5 mile search radius. That was confirmed by the site visit on October 13, 2020, by SJCA Inc. No wetlands are present within or adjacent to the project area, therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on January 7, 2021. Please refer to Appendix F, page 1 to 37 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no wetlands are present within or adjacent to the project area. The USACE makes all final determinations regarding jurisdiction.

IDEM responded with their automated letter on January 21, 2020, the USFWS responded on February 4, 2020, and the IDNR responded on February 20, 2020. No agencies responded to the early coordination letter with recommendations regarding wetlands that are applicable for this project. All applicable recommendations are included in the Environmental Commitments section of this CE document.

Terrestrial Habitat	<u>Presence</u>	<u>Impacts</u>	
	<input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Total terrestrial habitat in project area: 3.11 Acre(s) Total tree clearing: 0.05 Acre(s)

Describe types of terrestrial habitat (i.e. forested, grassland, farmland, lawn, etc.) adjacent or within the project area. Include whether or not impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on October 13, 2020, by SJCA Inc., and the aerial map of the project area (Appendix B, page 4), there are forested areas north of US 50 near the reinforced concrete box culvert. There are also areas of maintained lawn on the north side of US 50. A wooded area that is part of the Muscatatuck National Wildlife Refuge is present south of US 50. No impacts will occur to the Muscatatuck National Wildlife Refuge as a result of this project. The dominant species in the maintained lawn areas were Yellow Foxtail (*Setaria pumila*) and Barnyard Grass (*Echinochloa crus-galli*). The Dominant tree species in the wooded area around the reinforced concrete box culvert were Sugar Maple (*Acer saccharum*) and Paw Paw (*Asimina triloba*). Approximately 3.11 acres of terrestrial habitat will be disturbed during construction, and approximately 0.05 acre will occur in the form of tree clearing. Complete avoidance of impacts to terrestrial habitat would not allow for widening of the roadway and grading of the new ditches. Impacts will be minimized to the greatest extent possible by making the construction area as small as required to complete the project. Mitigation measures are not anticipated to be required for disturbance to terrestrial habitat for this project. Disturbed areas will be revegetated upon completion of the project.

IDEM with their automated response letter on January 21, 2021. They offered standard recommendations for all projects to minimize impacts to terrestrial habitat to the greatest extent possible (Appendix C, pages 6 to 10). The IDNR responded on February 20, 2020, with recommendations to install an entrenched silt fence (as feasible) parallel to US 50 on the south side of the roadway to keep snakes from entering the construction areas from Muscatatuck National Wildlife Refuge, to develop a mitigation plan for unavoidable impacts to habitat, to mitigate for non-wetland forest that will be removed as a result of the project, to revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion; do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species, to not cut any trees suitable for Indiana Bat or Northern Long-eared Bat roosting (greater than 5 inches diameter-at-breast height (dbh), living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30, and to implement appropriately designed measures for controlling erosion and sediment from entering streams or leaving the construction site, and to maintain those measures until construction is complete and all disturbed areas are stabilized (Appendix C, pages 18 to 20). The USFWS responded on February 4, 2020, with recommendations to not clear trees or understory vegetation outside the construction zone boundaries, and to implement temporary erosion and sediment control methods within areas of disturbed soil (Appendix C, pages 15 to 16). The Hoosier National Forest responded on January 22, 2020, but did not have any recommendations for the proposed project (Appendix C, page 14). All applicable recommendations are included in the Environmental Commitments of this CE document.

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Protected Species

Federally Listed Bats

	Yes	No
Information for Planning and Consultation (IPaC) determination key completed	X	
Section 7 informal consultation completed (IPaC cannot be completed)		X
Section 7 formal consultation Biological Assessment (BA) required		X

Determination Received for Listed Bats from USFWS: NE NLAA LAA

Other Species not included in IPaC

	Yes	No
Additional federal species found in project area (based on IPaC species list)	X	
State species (not bird) found in project area (based upon consultation with IDNR)	X	

Migratory Birds

	Yes	No
Known usage or presence of birds (i.e. nests)		X
State bird species based upon coordination with IDNR		X

Discuss IDNR coordination and species identified. Describe USFWS Section 7 consultation and determination received for Indiana bat and northern long-eared bat impacts. Discuss if other federally listed species were identified. If so, include consultation that has occurred and the determination that was received. Discuss if migratory birds have been observed and any impacts.

Based on a desktop review and the RFI report (Appendix E, pages 1 to 12), completed by SJCA Inc. on February 21, 2020, the IDNR Jackson County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR early coordination response letter dated February 20, 2020 (Appendix C, pages 18-20), the Natural Heritage Program's Database has been checked and additional ETR species are present within 0.5 mile of the project area. The state endangered Kirtland's Snake (*Clonophis kirtlandii*) and Water Copperbelly (*Nerodia erythrogaster neglecta*) have been documented within 0.5 mile of the project area in the Muscatatuck National Wildlife Refuge. It was recommended that an entrenched silt fence should be installed (as feasible) parallel to US 50 on the south side of the roadway to keep snakes from entering the construction areas from Muscatatuck National Wildlife Refuge. If work is conducted between November 1 and March 1, the silt fence is not needed (Appendix C, pages 18 to 20). This recommendation is included in the Environmental Commitments section of this document.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 23 to 29). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). Two (2) other species were generated in the IPaC species list along with the Indiana bat and northern long-eared bat. Refer to the paragraph below.

The official species list generated from IPaC indicated two (2) other species present within the project area. The Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*) and the Whooping Crane (*Grus americana*) are within the project area. The USFWS responded to early coordination on February 4, 2020, but did not provide any comments regarding the presence of these species (Appendix C, pages 15 to 16). The project qualifies for the USFWS Interim Policy. No further coordination is needed with USFWS.

The project qualifies for the Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB), dated May 2016 (revised February 2018), between the FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. A small structure inspection occurred on October 13, 2020, for the culvert and reinforced concrete pipe (RCP) to be removed; no bats or signs of bats were identified in the culvert or the RCP (Appendix C, pages 43 to 46). An effect determination key was completed on April 9, 2021, and based on the responses provided, the project was found to "May affect – Not likely to adversely affect" the Indiana bat and/or the NLEB (Appendix C, pages 30 to 42). INDOT reviewed and verified the effect finding on April 9, 2021, and requested USFWS's review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) and commitments are included as firm commitments in the Environmental Commitments section of this document.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

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Geological and Mineral Resources

Project located within the Potential Karst Features Area of Indiana
 Karst features identified within or adjacent to the project area
 Oil/gas or exploration/abandoned wells identified in the project area

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Date Karst Study/Report reviewed by INDOT EWPO (if applicable): N/A

Discuss if project is located in Potential Karst Features Area of Indiana and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Describe if any impacts will occur to any karst features. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Karst MOU and coordinated and reviewed by INDOT EWPO)

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Karst Memorandum of Understanding (MOU). According to the USGS topographic map of the project area (Appendix B, pages 2 to 3), and the RFI report (Appendix E, page 8), there are no karst features identified within or adjacent to the project area. In the early coordination response dated January 21, 2021, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, pages 11 to 13). The IGWS also indicated that the project has a high liquefaction potential, is within 0.5 mile of a regulated floodplain, there is moderate potential for bedrock resources, low potential for sand and gravel resources, and there are no documented active or abandoned mineral resource extraction sites within 0.5 mile of the project area. These features will not be impacted because there are no bedrock, sand and gravel, or active or abandoned mineral extraction sites within the project area. The response from IGWS has been communicated with the designer on April 12, 2021. No impacts are expected.

SECTION C – OTHER RESOURCES

Drinking Water Resources

Wellhead Protection Area(s)
 Source Water Protection Area(s)
 Water Well(s)
 Urbanized Area Boundary
 Public Water System(s)

Presence

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Impacts

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Is the project located in the St. Joseph Sole Source Aquifer (SSA):

If Yes, is the FHWA/EPA SSA MOU Applicable?

If Yes, is a Groundwater Assessment Required?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Check the appropriate boxes and discuss each topic below. Provide details about impacts and summarize resource-specific coordination responses and any mitigation commitments. Reference responses in the Appendix.

The project is located in Jackson County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/Environmental Protection Agency (EPA) Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

IDEM's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on January 21, 2021, by SJCA Inc. This project is not located within a Source Water Area but is located within a Wellhead Protection Area. In an early coordination letter dated February 4, 2020, IDEM stated the project is located within a Wellhead Protection Area (Appendix C, page 17). The features will not be affected because this project does not involve any impacts to drinking water resources. This project will comply with the Wellhead Protection Program guidelines on the IDEM Ground Water website. The manager of the wellhead protection area was contacted on March 23, 2020. No response was received.

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on April 11, 2021, by SJCA Inc. There are two wells adjacent to the project area associated with the apartment complex on the north side of US 50. The features will not be affected because construction will not occur where the wells are present. Therefore, no impacts are expected. Should it be determined during the ROW phase that these wells will be affected, a cost to cure will likely be included in the appraisal to restore the wells.

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Based on a desktop review of INDOT Functional Classification and Urban Area Boundary map (<https://indot.maps.arcgis.com/apps/webappviewer/index.html?id=df731deeea704512923b7732ed3ddad2>) by SJCA Inc. on April 11, 2021, this project is not located in an Urban Area Boundary. No impacts are expected.

Based on a desktop review, a site visit on October 13, 2020, by SJCA Inc., the aerial map of the project area (Appendix B, page 4), no public water systems were identified. Therefore, no impacts are expected.

Floodplains	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Project located within a regulated floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Longitudinal encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transverse encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homes located in floodplain within 1000' up/downstream from project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If applicable, indicate the Floodplain Level?

Level 1 Level 2 Level 3 Level 4 Level 5

Use the IDNR Floodway Information Portal to help determine potential impacts. Include floodplain map in appendix. Discuss impacts according to the classification system. If encroachment on a flood plain will occur, coordinate with the Local Flood Plain Administrator during design to insure consistency with the local flood plain planning.

The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) was accessed on January 21, 2021, by SJCA Inc. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 10). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

Farmland	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Agricultural Lands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Prime Farmland (per NRCS)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Total Points (from Section VII of CPA-106/AD-1006*) 92

**If 160 or greater, see CE Manual for guidance.*

Discuss existing farmland resources in the project area, impacts that will occur to farmland, and mitigation and minimization measures considered.

Based on a desktop review, a site visit on October 13, 2020 by SJCA Inc., and the aerial map of the project area (Appendix B, page 4), the project will convert 0.76 acre of farmland as defined by the Farmland Protection Policy Act (See note below). An early coordination letter was sent on January 21, 2020, and again on April 6, 2021 to NRCS. Coordination with NRCS resulted in a score of 92 on the AD 1006 Form (Appendix C, pages 21 to 22). Note: The overall permanent ROW total was used to calculate farmland impacts on the AD 1006 Form; however, no ROW acquisition from farmland will occur. This is reflected in the ROW table in this CE document. NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

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SECTION D – CULTURAL RESOURCES

Minor Projects PA	Category(ies) and Type(s) <u>B-1, B-3, B-4, B-9</u>	INDOT Approval Date(s) <u>February 25, 2021</u>	N/A <input type="checkbox"/>
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Full 106 Effect Finding

No Historic Properties Affected No Adverse Effect Adverse Effect

Eligible and/or Listed Resources Present

NRHP Building/Site/District(s) Archaeology NRHP Bridge(s)

Documentation Prepared (mark all that apply)

APE, Eligibility and Effect Determination
 800.11 Documentation
 Historic Properties Report or Short Report
 Archaeological Records Check and Assessment
 Archaeological Phase Ia Survey Report **X**
 Archaeological Phase Ic Survey Report
 Other:

ESD Approval Date(s)

SHPO Approval Date(s)

	February 25, 2021		N/A

MOA Signature Dates (List all signatories)

Memorandum of Agreement (MOA)

If the project falls under the MPPA, describe the category(ies) that the project falls under and any approval dates. If the project requires full Section 106, use the headings provided. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of the paper(s) and the comment period deadline. Include any further Section 106 work which must be completed at a later date, such as mitigation from a MOA or avoidance commitments.

On February 25, 2021, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Types 1, 3, 4, and 9 under the MPPA, (Appendix D, pages 1 to 6). Category B, Type 1 involves replacement, repair, or installation of curbs, curb ramps, or sidewalks. Category B, Type 3 involves construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening where work occurs in undisturbed soils and not adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource. Category B, Type 4 involves installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators where work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource. Category B, Type 9 involves installation, replacement, repair, lining, or extension of culverts and other drainage structures where work occurs in undisturbed soils and there may be impacts to unusual features, including historic brick or stone sidewalks, curbs, or curb ramps, stepped or elevated sidewalks and retaining walls, and work does not occur within or adjacent to a National Register-listed or National Register-eligible district or individual above-ground resource. An INDOT CRO historian performed a desktop review of the project area and found no non-modern materials or unusual features and no above-ground resources that possess the significance or integrity required to be considered eligible for the National Register of Historic Places. A Phase 1A archaeological investigation was conducted by a Qualified Professional (QP) from SJCA Inc. due to work in undisturbed soils, and no archaeological resources were identified during the field visit. The INDOT CRO added the commitment that all project activities, including access to place the revetment riprap on geotextile at the culvert will take place within or to the north of the existing US 50 pavement. No ground disturbing activities will take place south of the US 50 shoulder. This commitment will be placed on the project plans (Appendix D, page 5). No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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SECTION E – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

	<u>Presence</u>	<u>Use</u>	
		Yes	No
Parks and Other Recreational Land			
Publicly owned park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 <u>Evaluations Prepared</u>			
Programmatic Section 4(f)	<input type="checkbox"/>		
"De minimis" Impact	<input type="checkbox"/>		
Individual Section 4(f)	<input type="checkbox"/>		
Any exception included in 23 CFR 774.13	<input type="checkbox"/>		

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the discussion below. Individual Section 4(f) documentation must be included in the appendix and summarized below. Discuss proposed alternatives that satisfy the requirements of Section 4(f). FHWA has identified various exceptions to the requirement for Section 4(f) approval. Refer to 23 CFR § 774.13 - Exceptions.

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, the aerial map of the project area (Appendix B, page 4), and the RFI report (Appendix E, page 7), there is one potential 4(f) resource located within the 0.5 mile search radius. According to additional research, and by the site visit on October 13, 2020, by SJCA Inc., there is one 4(f) resources located adjacent to the project area. The Muscatatuck National Wildlife Refuge is on the south side of US 50 and is a publicly owned facility. The initial scope of the project included purchasing ROW from this property to be incorporated into the highway facility; however, the updated scope shifted work to the north side of US 50 to avoid impacts to this facility. The scope of this project will not change the features of the Muscatatuck National Wildlife Refuge that qualify it for Section 4(f) protection. The project will not use this resource by taking permanent ROW and will not indirectly use the resource in such a way that the protected activities, features, or attributes that qualify it for protection under Section 4(f) are substantially impaired. Therefore, no 4(f) use is expected.

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

Discuss Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the INDOT ESD website revealed a total of six (6) properties in Jackson County (Appendix I, page 1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

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SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project

Is the project in the most current STIP/TIP? Yes No
 Is the project located in an MPO Area? Yes No
 Is the project in an air quality non-attainment or maintenance area?
 If Yes, then:
 Is the project in the most current MPO TIP? Yes No
 Is the project exempt from conformity? Yes No
 If No, then:
 Is the project in the Transportation Plan (TP)? Yes No
 Is a hot spot analysis required (CO/PM)? Yes No

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Location in STIP: 2020-2024 STIP, Initial (Appendix H, page 1)
 Name of MPO (if applicable): N/A
 Location in TIP (if applicable): N/A

Level of MSAT Analysis required?

Level 1a Level 1b Level 2 Level 3 Level 4 Level 5

Describe if the project is listed in the STIP and if it is in a TIP. Describe the attainment status of the county(ies) where the project is located. Indicate whether the project is exempt from a conformity determination. If the project is not exempt, include information about the TP and TIP. Describe if a hot spot analysis is required and the MSAT Level.

The FY 2020-2024 STIP is listed based on the lead DES number in the contract. The lead DES number for this contract is DES 1700162. The FY 2020-2024 STIP includes DES number 1700161 by reference with the contract number R 41582 (Appendix H, page 1).

This project is located in Jackson County, which is currently a maintenance area for Ozone, under the 1997 Ozone 8-hour standard according to the U.S. Environmental Protection Agency (EPA) Green Book list of non-attainment and maintenance areas (https://www3.epa.gov/airquality/greenbook/anayo_in.html). The 1997 Ozone 8-hour standard was revoked in 2015 but is being evaluated for conformity due to the February 16, 2018, South Coast Air Quality Management District V. Environmental Protection Agency, Et. Al. Decision. This project has been identified as being exempt from air quality analysis in accordance with 40 CFR Part 93.126 and this project is not a project of air quality concern (40 CFR Part 93.123). Therefore, the project will have no significant impact on air quality.

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

SECTION G - NOISE

Noise

Yes No

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy? Yes No

Date Noise Analysis was approved/technically sufficient by INDOT ESD: _____

Describe if the project is a Type I or Type III project. If it is a Type I project, describe the studies completed to date and if noise impacts were identified. If noise impacts were identified, describe if abatement is feasible and reasonable and include a statement of likelihood.

This project is a Type III project. In accordance with 23 CFR 772 and the current Indiana Department of Transportation Traffic Noise Analysis Procedure, this action does not require a formal noise analysis.

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SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

- Will the proposed action comply with the local/regional development patterns for the area?
- Will the proposed action result in substantial impacts to community cohesion?
- Will the proposed action result in substantial impacts to local tax base or property values?
- Will construction activities impact community events (festivals, fairs, etc.)?
- Does the community have an approved transition plan?
- If No, are steps being made to advance the community's transition plan?
- Does the project comply with the transition plan? (explain in the discussion below)

Yes	No
X	
	X
	X
	X
X	
X	

Discuss how the project complies with the area's local/regional development patterns; whether the project will impact community cohesion; and impact community events. Discuss how the project conforms with the ADA Transition Plan.

This project complies with the local and regional development patterns because it will improve mobility in the project area. Jackson County has a Comprehensive Plan, which was adopted on September 19, 2006 (<http://www.jacksoncounty.in.gov/COMPREHENSIVE-PLAN.pdf>). This project complies with the Jackson County Comprehensive Plan, as it will improve local roads and will include the construction of turn lanes to fulfill an existing need. This project will not have a substantial impact on community cohesion, the local tax base or property values, or community events. Various fairs and festivals are scheduled in the City of Seymour to the west of the project area. It is likely that these festivals will occur during the construction year; however, access will not be limited or restricted due to this project because the project does not propose a road closure and detour. No fairs or festivals are known to be scheduled in the immediate vicinity of the project area. Therefore, no impacts are expected.

Jackson County has an approved Americans with Disabilities Act (ADA) transition plan (<http://www.jacksoncounty.in.gov/search.php?q=ADA+PLAN>) which was enacted in May 2015. The plan outlines Jackson County's strategy for maintaining ADA compliant facilities. This project complies with the ADA transition plan because it does not involve any pedestrian facilities and will not restrict access to any facilities. No impacts are expected.

Public Facilities and Services

Discuss what public facilities and services are present in the project area and impacts (such as MOT) that will occur to them. Include how the impacts have been minimized and what coordination has occurred. Some examples of public facilities and services include health facilities, educational facilities, public and private utilities, emergency services, religious institutions, airports, transportation or public pedestrian and bicycle facilities.

Based on a desktop review, the aerial map of the project area (Appendix B, page 4), and the RFI report (Appendix E, page 7) there are no public facilities within the 0.5 mile search radius. That was confirmed by the site visit on October 13, 2020, by SJCA Inc. There are no public facilities within or adjacent to the project area; therefore, no impacts are expected. Access to all properties will be maintained during construction.

Various utilities on the north side of US 50 will require relocation to widen the roadway and grade the ditches. These include electric and communications lines. Temporary interruptions are expected; however, no permanent disruptions to utilities will occur. Utility disruptions will be minimized to the greatest extent possible to complete construction. Coordination with utility companies is ongoing and will continue during project development.

Early coordination letters were sent to the Jackson County Surveyor, the Jackson County Commissioners, and the Jackson County Highway Superintendent on January 21, 2020, and again on April 6, 2021. No responses were received regarding public facilities. All applicable recommendations are included in the Environmental Commitments section of this CE document.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

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Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Will the project result in adversely high and disproportionate impacts to EJ populations?

Indicate if EJ issues were identified during project development. If an EJ analysis was not required, discuss why. If an EJ analysis was required, describe how the EJ population was identified. Include if the project has a disproportionately high and adverse effect on EJ populations and explain your reasoning. If yes, describe actions to avoid, minimize and mitigate these effects.

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require approximately 0.76 acre of permanent ROW and no relocations. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Jackson County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 9675. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the U.S. Census from 2017 was obtained from the U.S. Census website (<http://factfinder2.census.gov>) on March 23, 2020, by SJCA Inc. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (U.S. Census, 2017)		
	COC – Jackson County, Indiana	AC-1 – Census Tract 9675, Jackson County, Indiana
Percent Minority	10.7%	11.9%
125% of COC	13.4%	AC < 125% of COC
EJ Population of Concern		No
Percent Low-Income	15.6%	8.9%
125% of COC	19.4%	AC < 125% of COC
EJ Population of Concern		No

AC-1, Census Tract 9675 has a percent minority of 11.9% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain minority populations of EJ concern.

AC-1, Census Tract 9675 has a percent low-income of 8.9% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 do not contain low-income populations of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I, pages 2 to 5. The EJ analysis concluded that there are no minority or low-income EJ populations of concern within AC-1. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Is a BIS or CSRS required?

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: 0

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.

No relocations of people, businesses, or farms will take place as a result of this project.

Indiana Department of Transportation

County Jackson

Route US 50

Des. No. 1700162/1700161

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation (RFI)	<input checked="" type="checkbox"/>
Phase I Environmental Site Assessment (Phase I ESA)	<input type="checkbox"/>
Phase II Environmental Site Assessment (Phase II ESA)	<input type="checkbox"/>
Design/Specifications for Remediation required?	<input type="checkbox"/>

Date RFI concurrence by INDOT SAM (if applicable): February 21, 2020

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Based on a review of GIS and available public records, a RFI was concurred by INDOT Site Assessment and Management (SAM) on February 21, 2020 (Appendix E, pages 1 to 12). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. The project was re-evaluated on April 6, 2021, because the RFI was more than one year old. No hazmat sites were identified during the re-evaluation and INDOT SAM determined that an addendum was not required for this project (Appendix E, pages 13 to 14). Further investigation for hazardous material concerns or regulated substances is not required at this time.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Environmental Management (401/Rule 5)

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Isolated Wetlands	<input type="checkbox"/>
Rule 5	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Natural Resources

Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>

Mitigation Required

US Coast Guard Section 9 Bridge Permit	<input type="checkbox"/>
Others (Please discuss in the discussion below)	<input type="checkbox"/>

Indiana Department of Transportation

County Jackson

Route US 50

Des. No. 1700162/1700161

List the permits likely required for the project and summarize why the permits are needed, including permits designated as "Other."

A Construction in a Floodway permit will not be required because this project does not occur within a regulated floodplain. A Rule 5 permit with IDEM will be required because the project will disturb more than one acre. Mitigation for impacts is not anticipated to be required.

Applicable recommendations provided by resource agencies are included in the Environmental Commitments section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

It is the responsibility of the project sponsor to identify and obtain all required permits.

ENVIRONMENTAL COMMITMENTS

List all commitments and include the name of agency/organization requesting/requiring the commitment(s). Listed commitments should be numbered.

Firm:

1. If the scope of work or permanent or temporary ROW amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Seymour District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. All project activities, including access to place the revetment riprap on geotextile at the culvert will take place within or to the north of the existing US 50 pavement. No ground disturbing activities will take place south of the US 50 shoulder. This commitment will be placed on the project plans. (INDOT CRO)
4. GENERAL AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
5. TREE REMOVAL AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
6. TREE REMOVAL AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed (No tree clearing April 1 – September 30). (USFWS)
7. TREE REMOVAL AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
8. TREE REMOVAL AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
9. LIGHTING AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
10. An entrenched silt fence should be installed (as feasible) parallel to US 50 on the south side of the roadway to keep snakes from entering the construction areas from Muscatatuck National Wildlife Refuge. If work is conducted and completed between November 1 and March 1, the silt fence is not needed. (IDNR)

For Further Consideration:

11. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (5:1 mitigation based on the number of large trees). (IDNR)
12. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting from April 1 through September 30. (IDNR)

Des 1700162 and Des 1700161 CE-2 Appendices

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Des 1700162 and Des 1700161 CE-2

Appendix A

CE Threshold Chart

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts³	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit ⁴
Wetland Impacts³	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way⁵	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	“No Effect”, “Not likely to Adversely Affect” (With select AMMs ⁶)	“Not likely to Adversely Affect” (With any AMMs or commitments)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic ⁷
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or “No Effect”	“Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁸
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any ⁹
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ¹⁰
Approval Level	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA
<ul style="list-style-type: none"> • District Env. (DE) • Env. Serv. Div. (ESD) • FHWA 					

¹ Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

² Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³ Total permanent impacts to streams (linear feet) and wetlands (acres).

⁴ US Army Corps of Engineers Individual 404 Permit

⁵ Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.

⁶ Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.

⁷ Projects that do not fall under a Species Specific Programmatic and results in a “Likely to Adversely Affect”. Other findings can be processed as a lower level CE.

⁸ Potential for causing a disproportionately high and adverse impact.

⁹ Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.

¹⁰ Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

* Includes the threatened/endangered species critical habitat

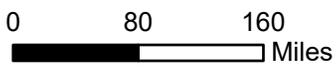
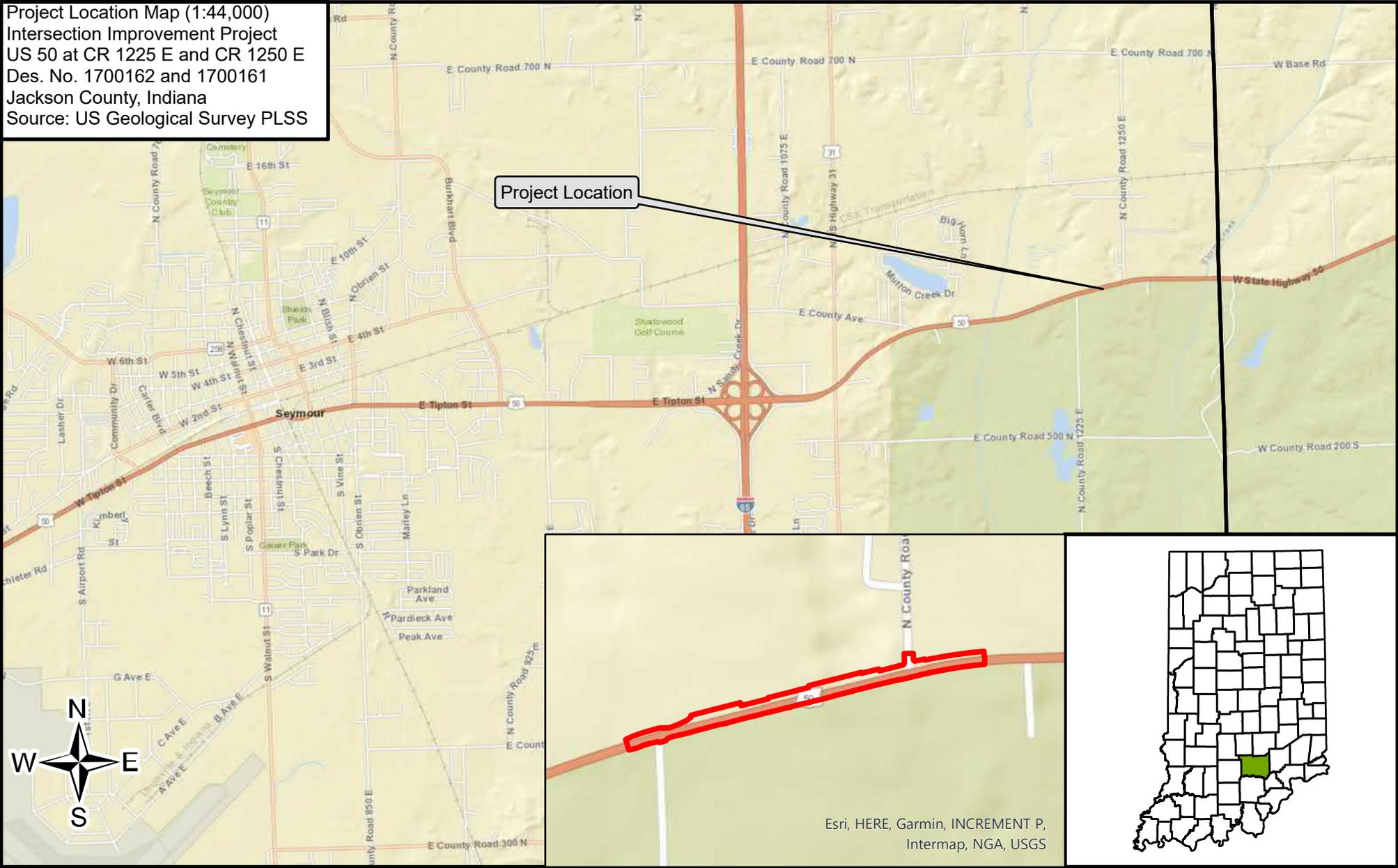
Note: Substantial public or agency controversy may require a higher-level NEPA document.

Des 1700162 and Des 1700161 CE-2

Appendix B

Graphics and Plan Sheets

Project Location Map (1:44,000)
 Intersection Improvement Project
 US 50 at CR 1225 E and CR 1250 E
 Des. No. 1700162 and 1700161
 Jackson County, Indiana
 Source: US Geological Survey PLSS

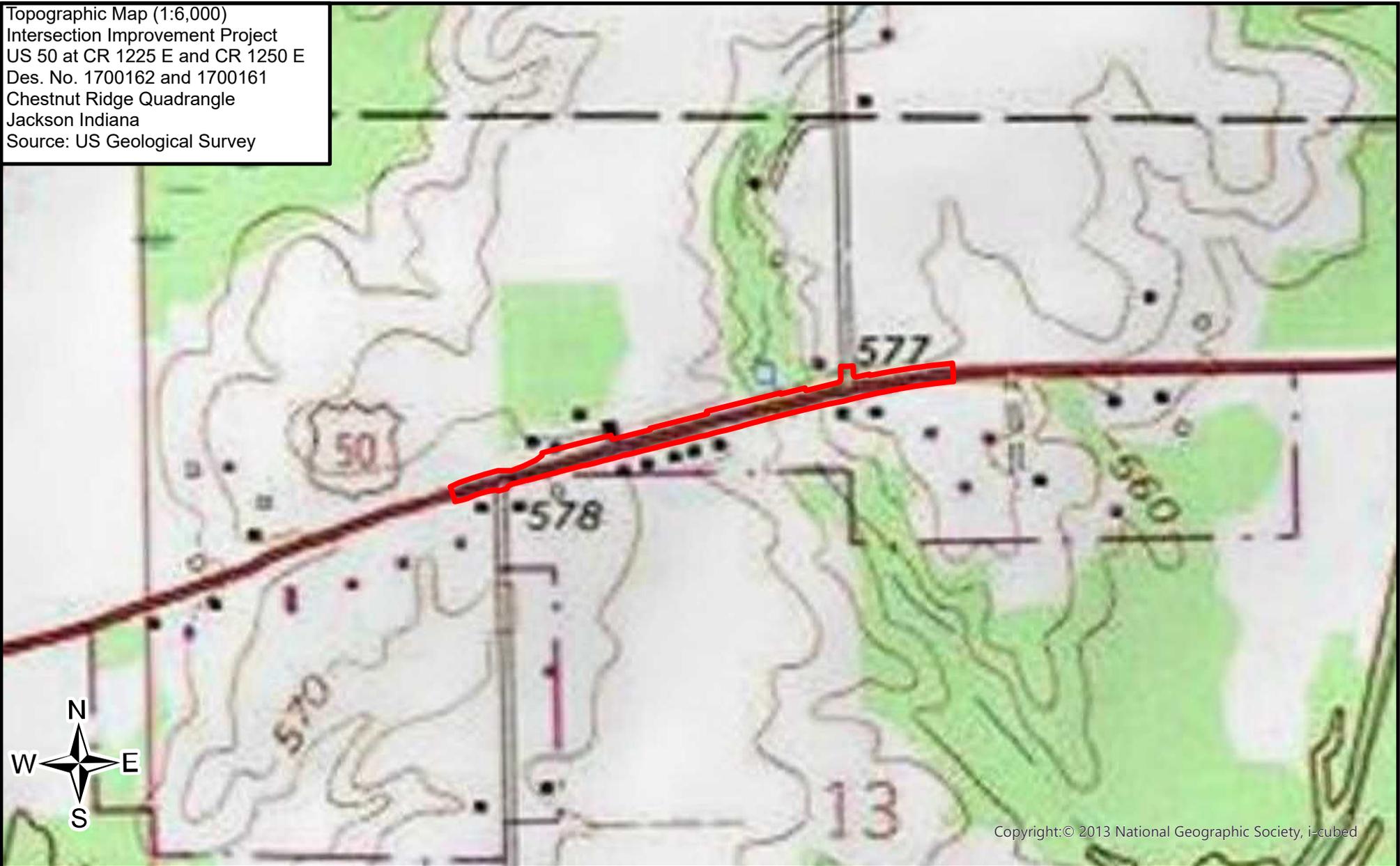


- County Boundary
- Project County



4/5/2021

Topographic Map (1:6,000)
Intersection Improvement Project
US 50 at CR 1225 E and CR 1250 E
Des. No. 1700162 and 1700161
Chestnut Ridge Quadrangle
Jackson Indiana
Source: US Geological Survey



Copyright:© 2013 National Geographic Society, i-cubed

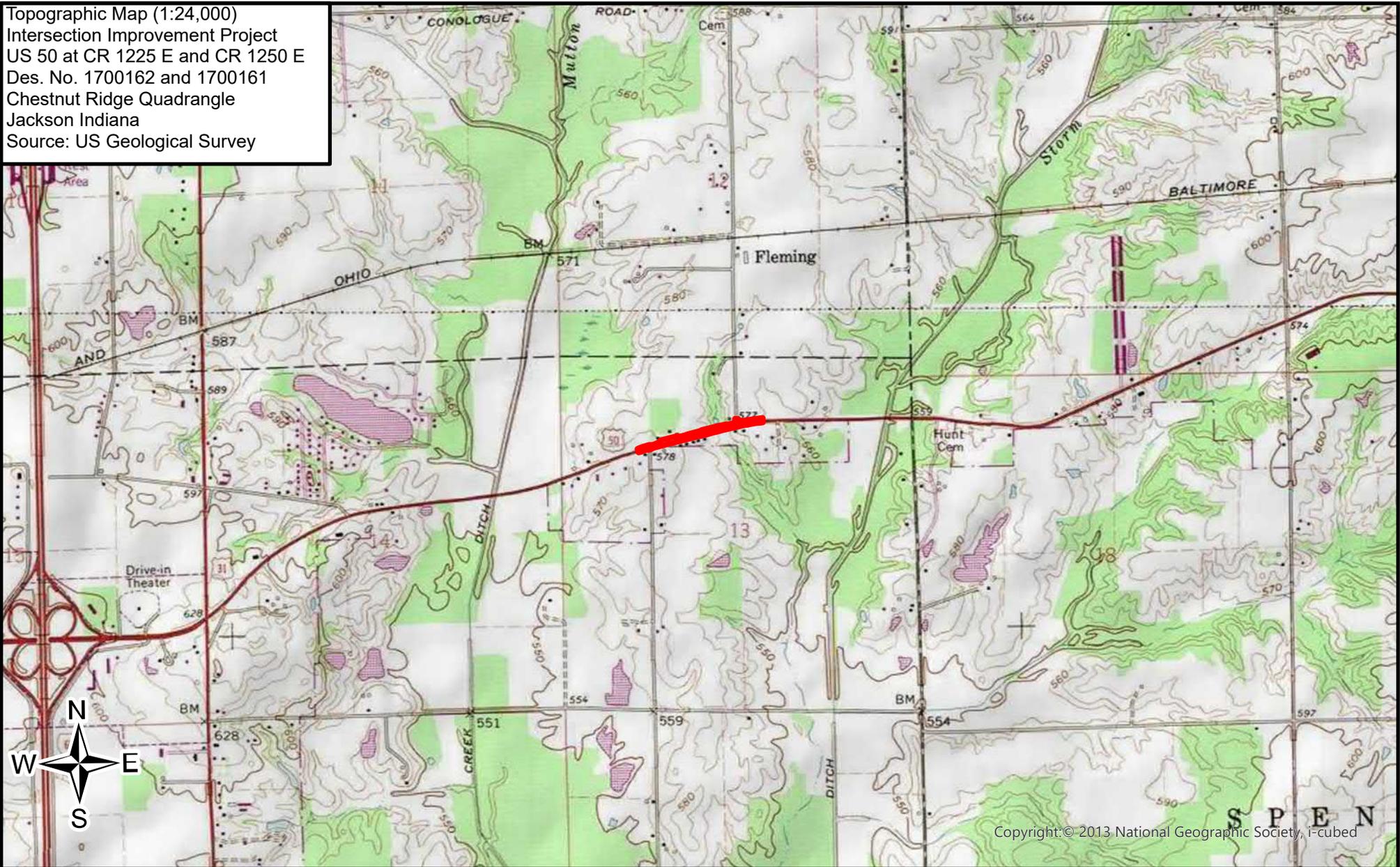
0 0.05 0.1
Miles

 Project Location



4/5/2021

Topographic Map (1:24,000)
Intersection Improvement Project
US 50 at CR 1225 E and CR 1250 E
Des. No. 1700162 and 1700161
Chestnut Ridge Quadrangle
Jackson Indiana
Source: US Geological Survey



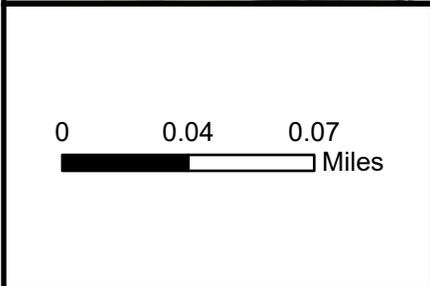
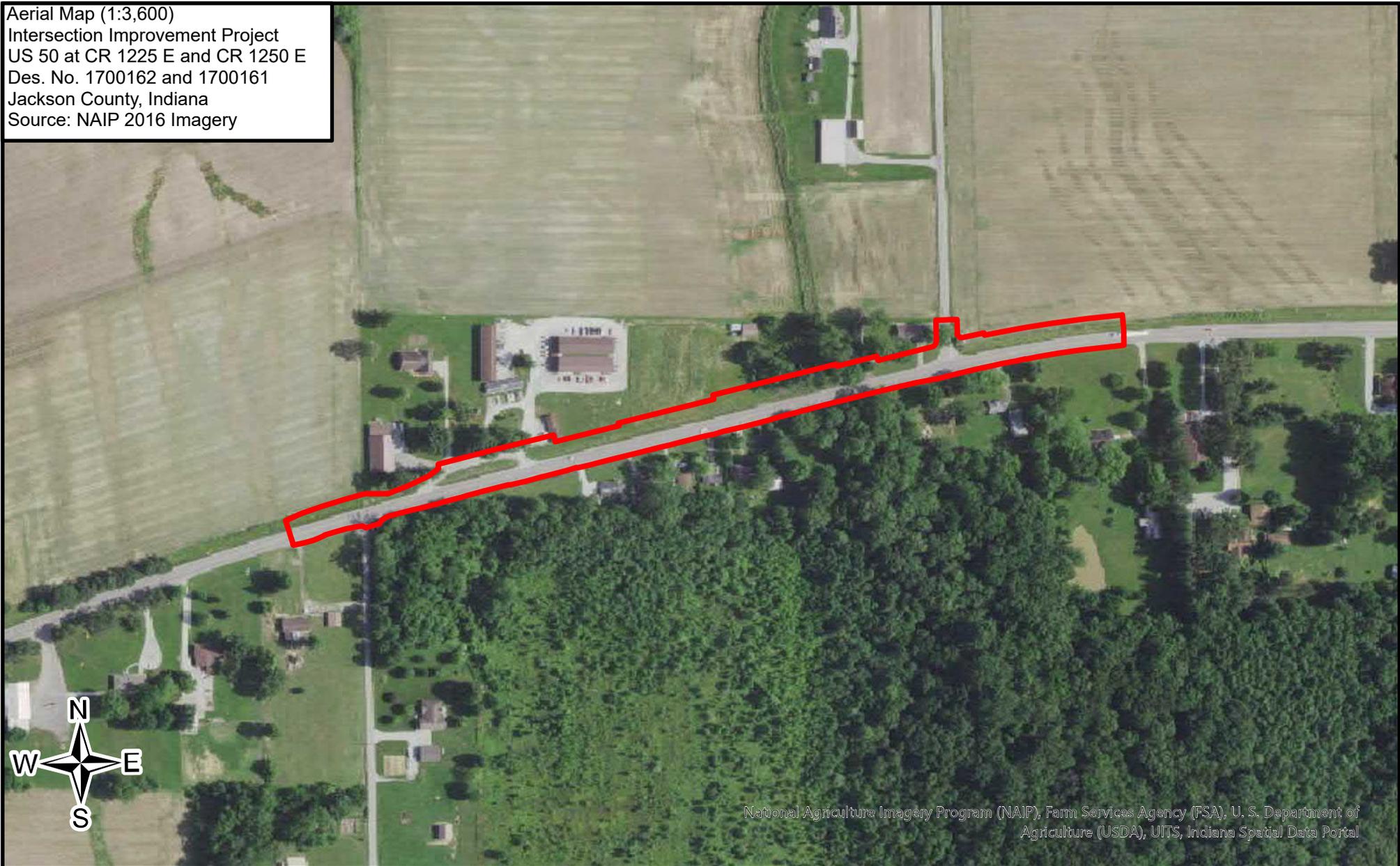
0 0.25 0.5
Miles

 Project Location



4/5/2021

Aerial Map (1:3,600)
Intersection Improvement Project
US 50 at CR 1225 E and CR 1250 E
Des. No. 1700162 and 1700161
Jackson County, Indiana
Source: NAIP 2016 Imagery



 Project Location

4/5/2021



Photo Location and Orientation Map (1:2,400)
Intersection Improvement Project
US 50 at CR 1225 E and CR 1250 E
Des. No. 1700162 and 1700161
Jackson County, Indiana
Source: SJCA Inc Field Survey



0 0.03 0.05
Miles

 Project Location
 Photo Location



4/5/2021



Photo 1. West Project Terminus Facing Southwest



Photo 2. West Project Terminus Facing East



Photo 3. US 50 and CR 1225 E Intersection Facing Southwest



Photo 4. Parking Area Facing Southwest



Photo 5. US 50 near Culvert Facing Southwest



Photo 6. US 50 near Culvert Facing Northeast



Photo 7. US 50 Facing Northeast



Photo 8. US 50 Facing Southwest



Photo 9. Intersection of US 50 and CR 1250 E Facing West



Photo 10. Intersection of US 50 and CR 1250 E Facing East

INDIANA
DEPARTMENT OF
TRANSPORTATION



ROAD PLANS

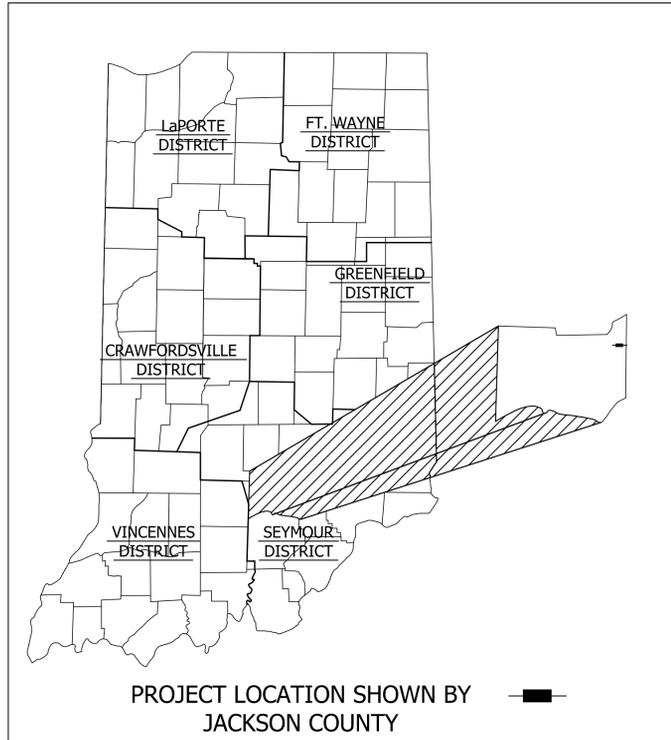
US 50 at CR 1225/1250
PROJECT NO. 1700161/ 1700162 P.E.
1700161/ 1700162 R/W
1700161/ 1700162 CONST.

MOBILITY IMPROVEMENT PROJECT AT THE INTERSECTIONS OF US 50
& CR 1225 E AND US 50 & CR 1250 E, SECTION 13, T-6-N, R-6-E IN
THE TOWNSHIP OF SEYMOUR IN JACKSON COUNTY, INDIANA

RP 106+1.009 & 106+25

US 50	
TRAFFIC DATA	
A.A.D.T. (2019)	11,857 VPD
A.A.D.T. (2044)	14,786 VPD
D.H.V. (2044)	1,332 VPH
DIRECTIONAL DISTRIBUTION	49.80% POSITIVE
TRUCKS	14.29% A.A.D.T., 6.53% DHV
DESIGN DATA - Rural Area	
DESIGN SPEED	55 MPH
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTION CLASSIFICATION	PRINCIPAL ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

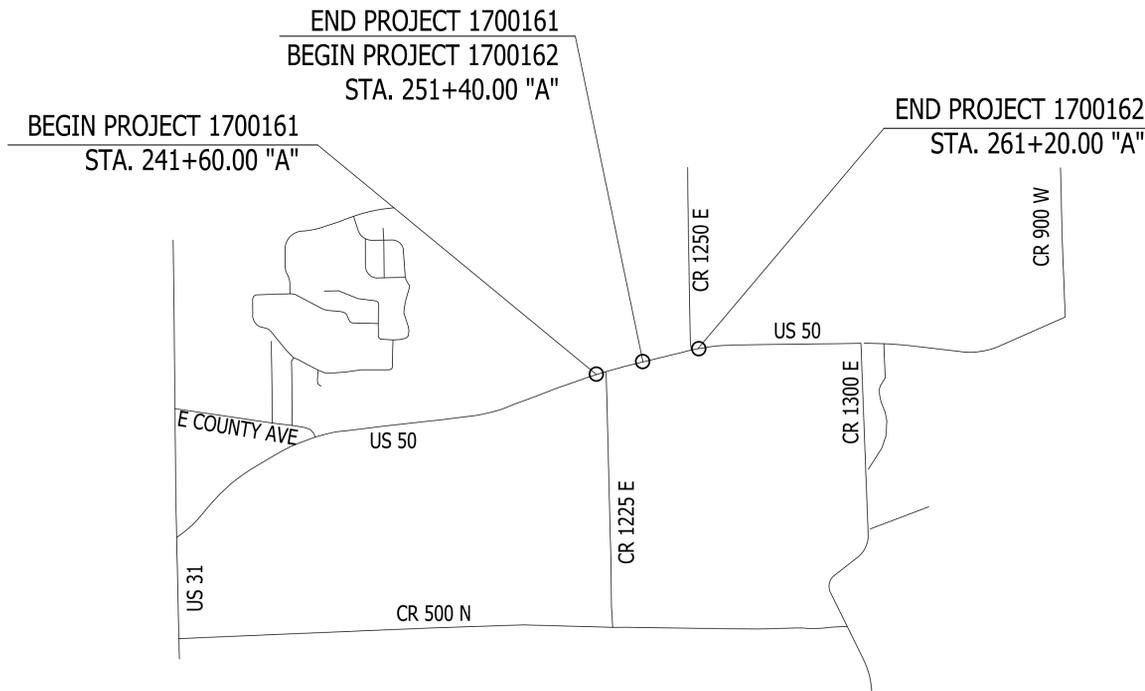
PROJECT	DESIGNATION
1700161/ 1700162	1700161/ 1700162
CONTRACT	BRIDGE FILE
R-41582	AS NOTED



Latitude 38°57'57" N Longitude 85°48'40" W

NOTE TO REVIEWER:
DES NO 1700161 AND 1700162 ARE PACKAGED TOGETHER AS A SINGLE SET OF PLANS.

KIN PROJECT INFORMATION	
DES. NO.	PROJECT DESCRIPTION
1700161	US 50 AT CR 1225



NOTE TO REVIEWER
A Level 1 Design Exception is being requested:
DES 1700161 & DES 1700162
1. Superelevation Rate
2. Superelevation Transition Length
3. Through Travel Lane Cross Slope
DES 1700162
1. Usable Shoulder Width

GROSS LENGTH:	0.37	MI.
NET LENGTH:	0.37	MI.
MAXIMUM GRADE:	1.11	%

HYDROLOGIC UNIT CODES
051202070704

LOCATION MAP
SCALE: 1" = 1,500'

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS

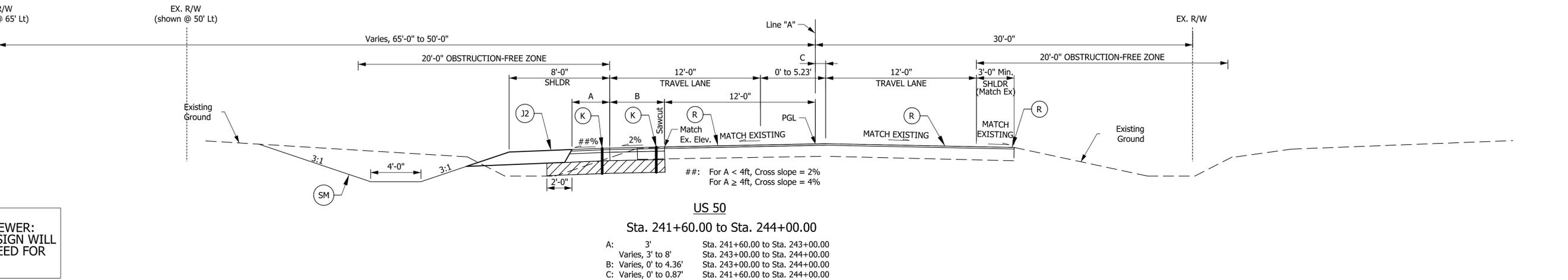
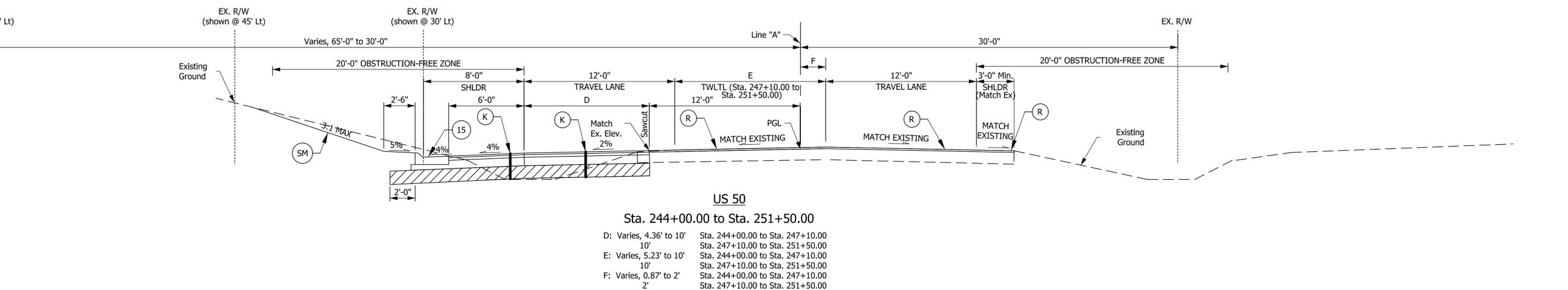
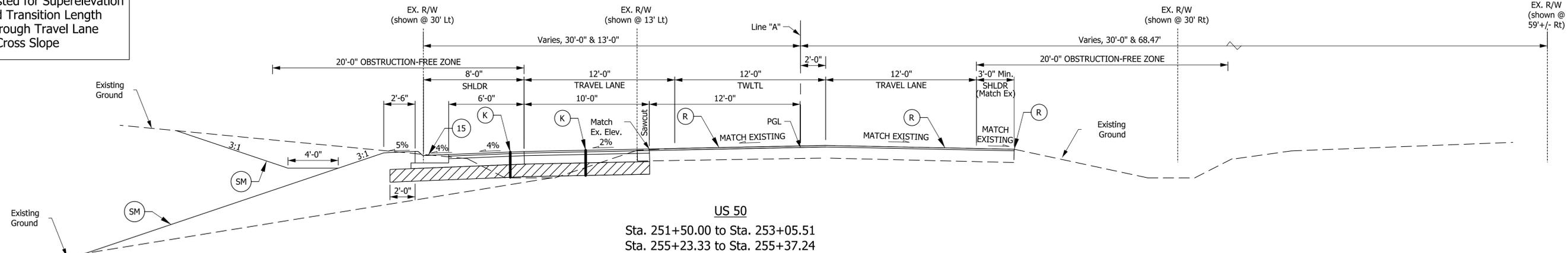
251 N. ILLINOIS ST.
CAPITOL CENTER SUITE 920
INDIANAPOLIS, IN 46204
PHONE (317) 237-2760
FAX (317) 237-2755

**MAY 1, 2020
STAGE 2 SUBMITTAL**

PLANS PREPARED BY: BURGESS & NIPLE, INC. (317) 237-2760 PHONE NUMBER		BRIDGE FILE	N/A
PREPARED BY:	DATE	DESIGNATION	1700161/ 1700162
FOR LETTING: APPROVED: INDIANA DEPARTMENT OF TRANSPORTATION	DATE	DWG. NO. / SHEET NO.	TI-01 / 1 of 42
		CONTRACT	R-41582
		PROJECT	1700161/ 1700162

5/1/2020 F:\P\1700161\1700162\CDST\01.dgn

NOTE TO REVIEWER
 A Level 1 Design Exception is
 being requested for Superlevation
 Rate and Transition Length
 AND Through Travel Lane
 Cross Slope



NOTE TO REVIEWER:
 PAVEMENT DESIGN WILL
 DETERMINE NEED FOR
 UNDERDRAIN.

- LEGEND**
- (K) 165 #/SY QC/QA-HMA, 3, 70, SURFACE, 9.5 mm ON 275 #/SY QC/QA-HMA, 3, 70, INTERM., 12.5 mm ON 880 #/SY QC/QA-HMA, 3, 64, BASE, 25 mm ON SUBGRADE TREATMENT, TYPE IC
 - (R) HMA FOR RESURFACING 165 #/SY QC/QA-HMA, 3, 70, SURFACE 9.5mm ON 1.5" MILLING, ASPHALT
 - (A1) HMA FOR APPROACHES 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 1.5" MILLING, HMA
 - (J2) COMPACTED AGGREGATE, NO. 53
 - (SM) MULCH SEEDING, TYPE R
 - (15) COMBINED CONCRETE CURB AND GUTTER, TYPE B (SLOPING)

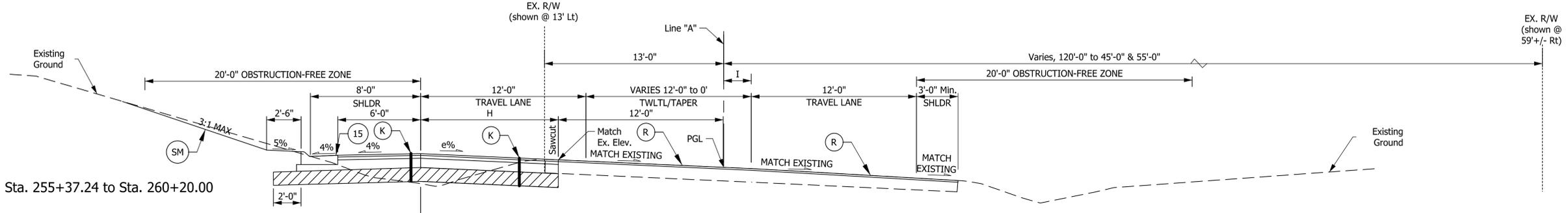
RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: SNP	DRAWN: SNP		
CHECKED: KSC	CHECKED: KSC		

INDIANA
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

HORIZONTAL SCALE 1/4" = 1'-0"	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION 1700161/ 1700162
SURVEY BOOK	DWG. NO. SHEET NO.
	TS-01 3 of 42
CONTRACT R-41582	PROJECT 1700161/ 1700162

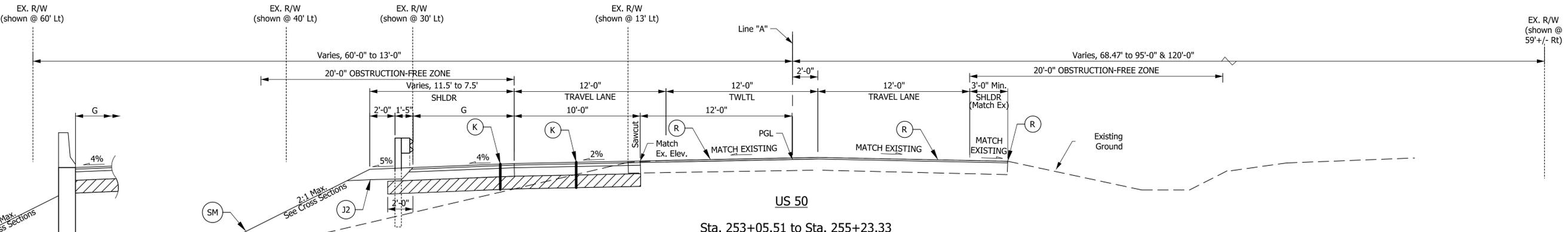
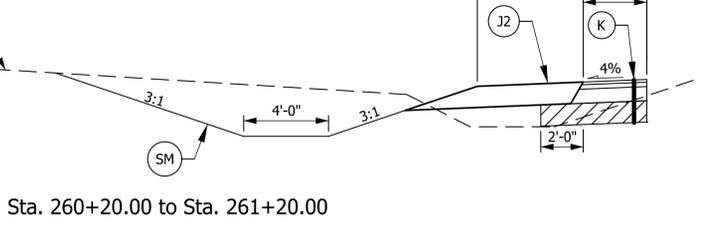
NOTE TO REVIEWER
A Level 1 Design Exception is being requested for Superelevation Rate and Transition Length AND Through Travel Lane Cross Slope



US 50-SUPERELEVATION

Sta. 255+37.24 to Sta. 261+20.00
e_{max} = 3.0% (NDC = 4.5%)

H:	10'	Sta. 255+37.24 to Sta. 255+70.00
	Varies, 10' to 7'	Sta. 255+70.00 to Sta. 257+35.00
	Varies, 7' to 0'	Sta. 257+35.00 to Sta. 261+20.00
I:	2'	Sta. 255+37.24 to Sta. 255+70.00
	Varies, 2' to 5'	Sta. 255+70.00 to Sta. 257+35.00
	Varies, 5' to 0'	Sta. 257+35.00 to Sta. 261+20.00

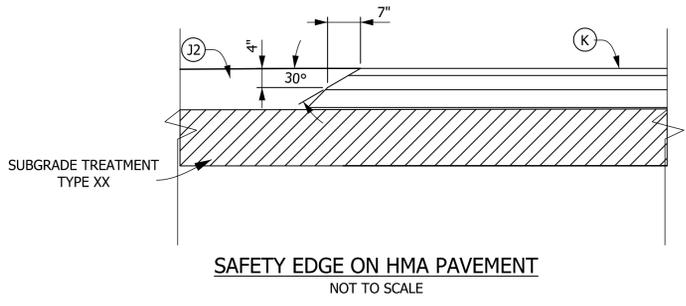


US 50
Sta. 253+05.51 to Sta. 255+23.33

G:	Varies, 8' to 4'	Sta. 253+75.06 to Sta. 254+23.06
	4'	Sta. 254+23.06 to Sta. 254+66.81
	Varies, 4' to 8'	Sta. 254+66.81 to Sta. 255+23.33

GUARDRAIL LIMITS: STA. 252+97.51 "A" TO STA. 253+68.00 "A"
RETAINING WALL LIMITS: STA. 253+68.00 "A" TO STA. 254+79.80
GUARDRAIL LIMITS: STA. 254+79.80 "A" TO STA. 255+32.07 "A"

NOTE TO REVIEWER
A Level 1 Design Exception is being requested for Usable Shoulder Width at location adjacent to the proposed guardrail



NOTE TO REVIEWER:
PAVEMENT DESIGN WILL DETERMINE NEED FOR UNDERDRAIN.

LEGEND

(K) 165 #/SY QC/QA-HMA, 3, 70, SURFACE, 9.5 mm ON 275 #/SY QC/QA-HMA, 3, 70, INTERM., 12.5 mm ON 880 #/SY QC/QA-HMA, 3, 64, BASE, 25 mm ON SUBGRADE TREATMENT, TYPE IC

(R) HMA FOR RESURFACING 165 #/SY QC/QA-HMA, 3, 70, SURFACE 9.5mm ON 1.5" MILLING, ASPHALT

(A1) HMA FOR APPROACHES 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 1.5" MILLING, HMA

(J2) COMPACTED AGGREGATE, NO. 53

(SM) MULCHED SEEDING, TYPE R

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____

DESIGNED: SNP DRAWN: SNP

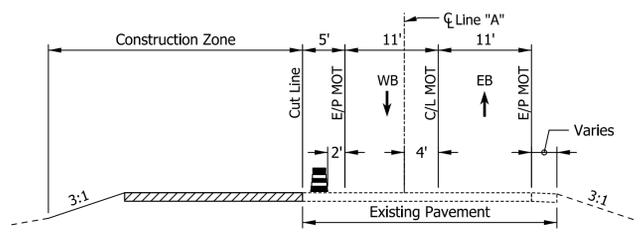
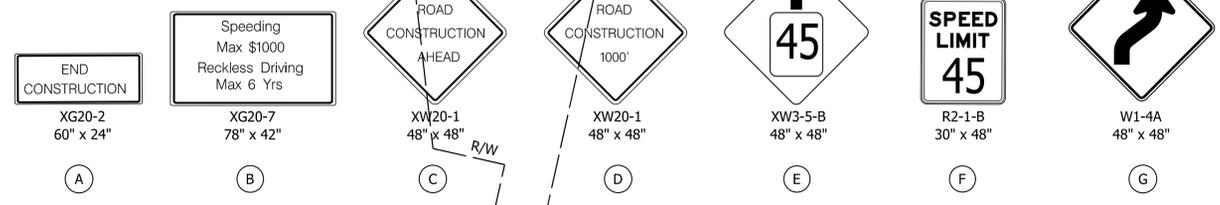
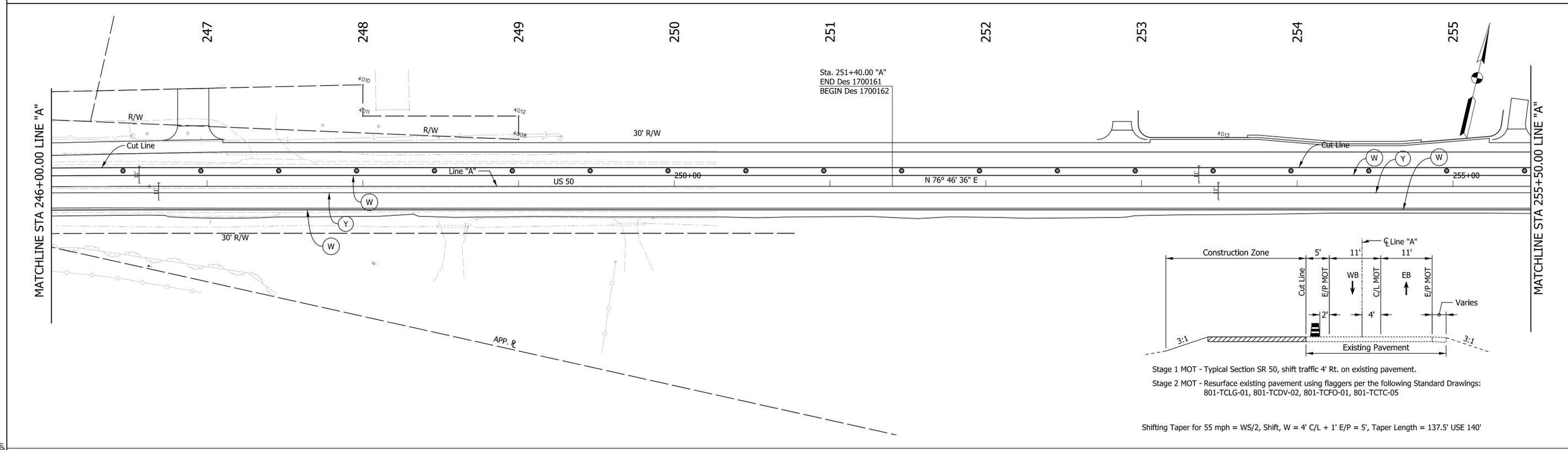
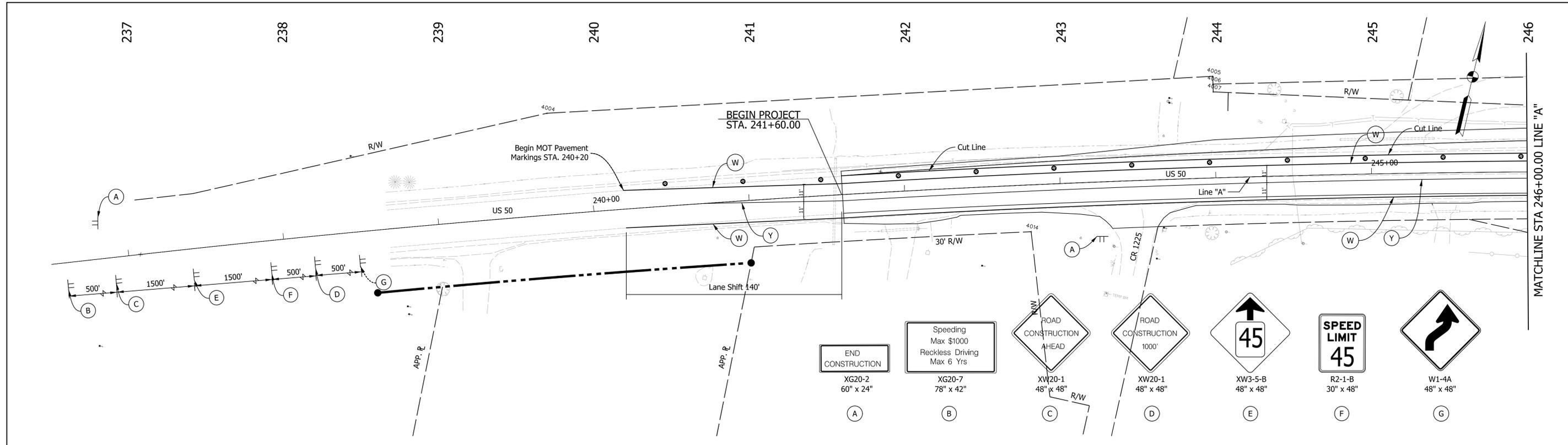
CHECKED: KSC CHECKED: KSC

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE	
1/4" = 1'-0"	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700161/ 1700162	
SURVEY BOOK	DWG. NO.	SHEET NO.
	TS-02	4 of 42
CONTRACT	PROJECT	
R-41582	1700161/ 1700162	

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Stage 1 MOT - Typical Section SR 50, shift traffic 4' Rt. on existing pavement.
 Stage 2 MOT - Resurface existing pavement using flaggers per the following Standard Drawings:
 801-TCLG-01, 801-TCDV-02, 801-TCFO-01, 801-TCTC-05

Shifting Taper for 55 mph = WS/2, Shift, W = 4' C/L + 1' E/P = 5', Taper Length = 137.5' USE 140'

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- LEGEND**
- (W) TEMPORARY WHITE LINE
 - (Y) TEMPORARY YELLOW LINE
 - DRUM - 50' Spacing

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE	
DESIGNED:	JLG	DRAWN:	JLG		
CHECKED:	SCS	CHECKED:	SCS		

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE	
1" = 30'		
VERTICAL SCALE	DESIGNATION	
N/A	1700161/ 1700162	
SURVEY BOOK	DWG. NO.	SHEET NO.
	MT-01	7 of 42
CONTRACT	PROJECT	
R-41582	1700161/ 1700162	



256

257

258

259

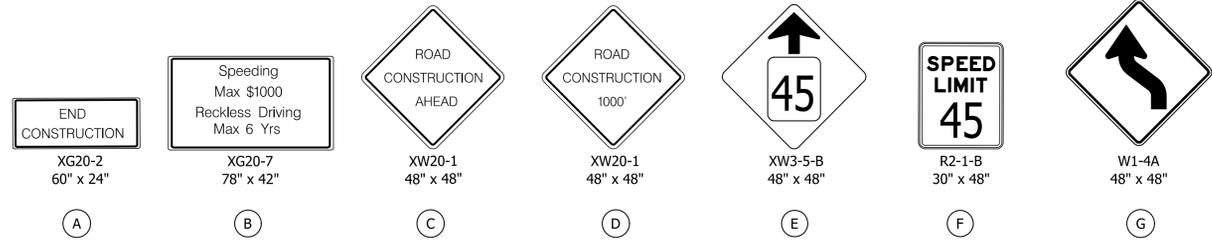
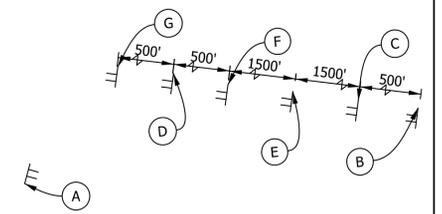
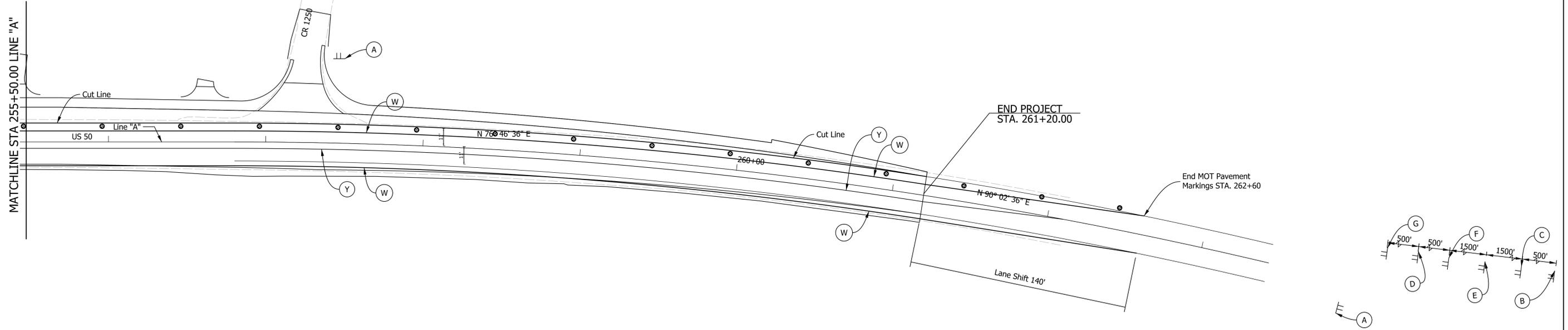
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261

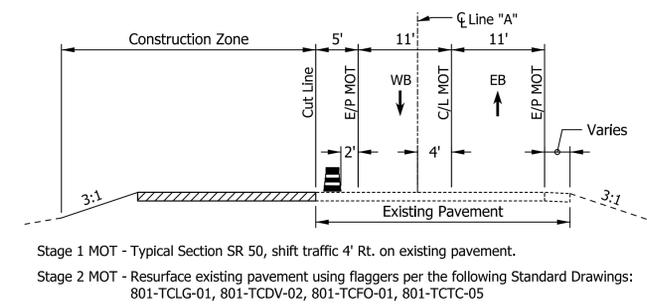
262

263

264



US 50 MOT SUMMARY	UNIT	Des 1700161	Des 1700162
TPM, REMOVABLE, YELLOW, 4"	LFT	2300	2300
TPM, REMOVABLE, WHITE, 4"	LFT	2300	2300
BARRELS	EACH	50	50
SIGN XG20-2	EACH	2	2
SIGN XG20-7	EACH	1	1
SIGN XW20-1	EACH	1	1
SIGN XW20-1	EACH	1	1
SIGN XW3-5-B	EACH	1	1
SIGN R2-1-B	EACH	1	1
SIGN W1-4A	EACH	1	1



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LEGEND
 (W) TEMPORARY WHITE LINE
 (Y) TEMPORARY YELLOW LINE
 ● DRUM - 50' Spacing

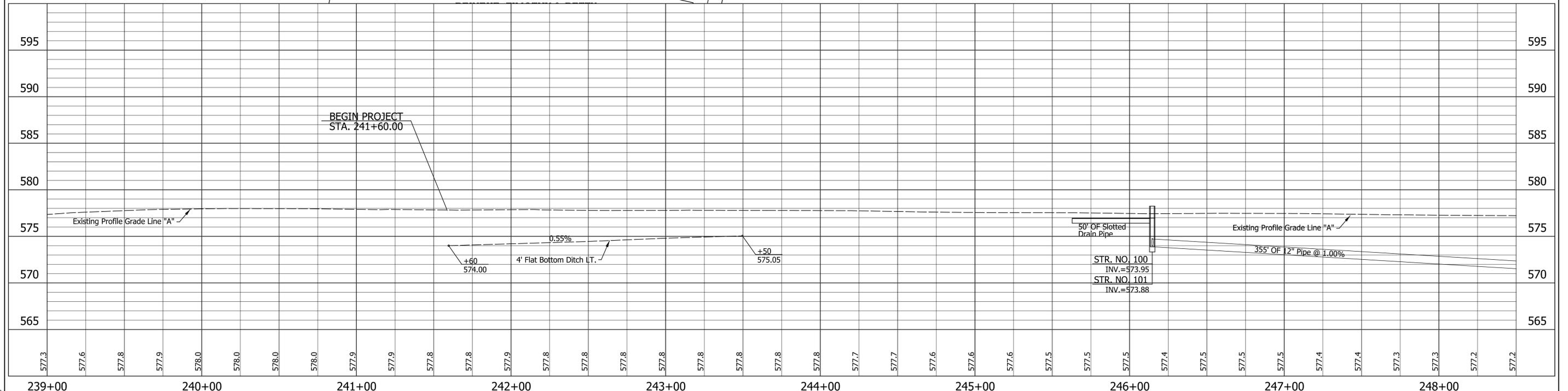
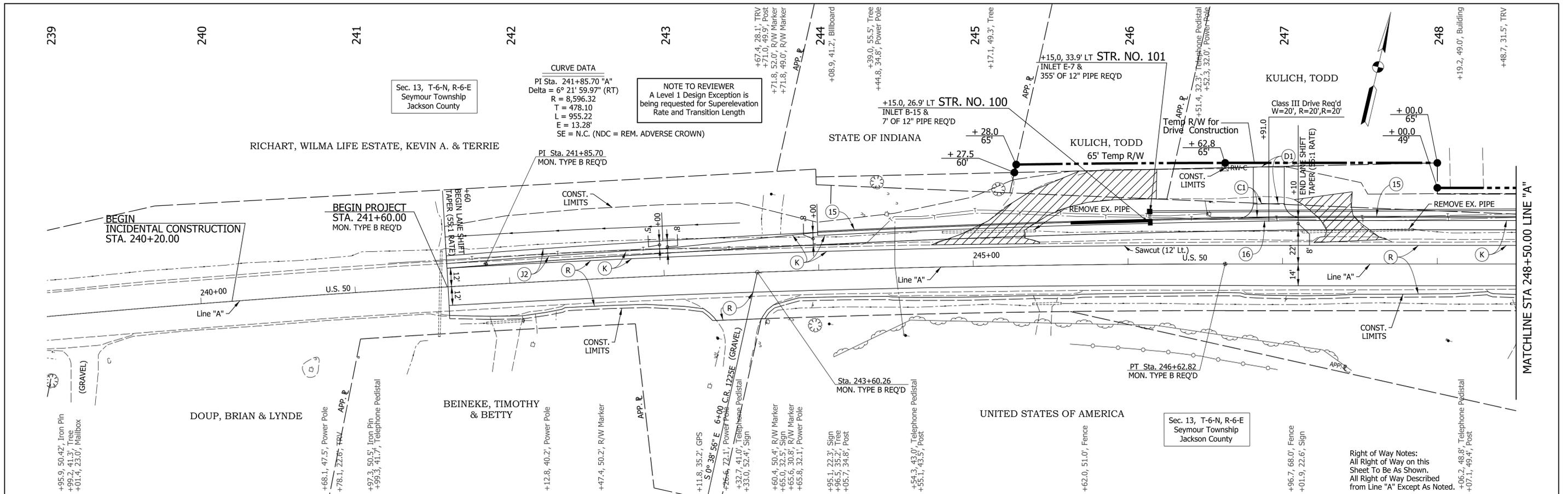
RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____ DATE _____	
DESIGNED: JLG	DRAWN: JLG		
CHECKED: SCS	CHECKED: SCS		

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

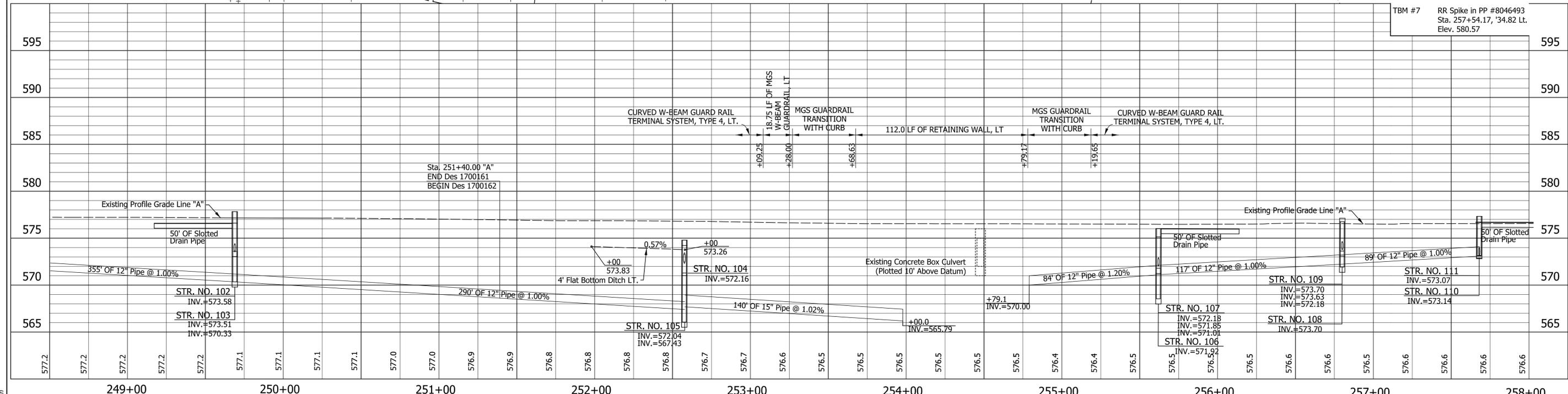
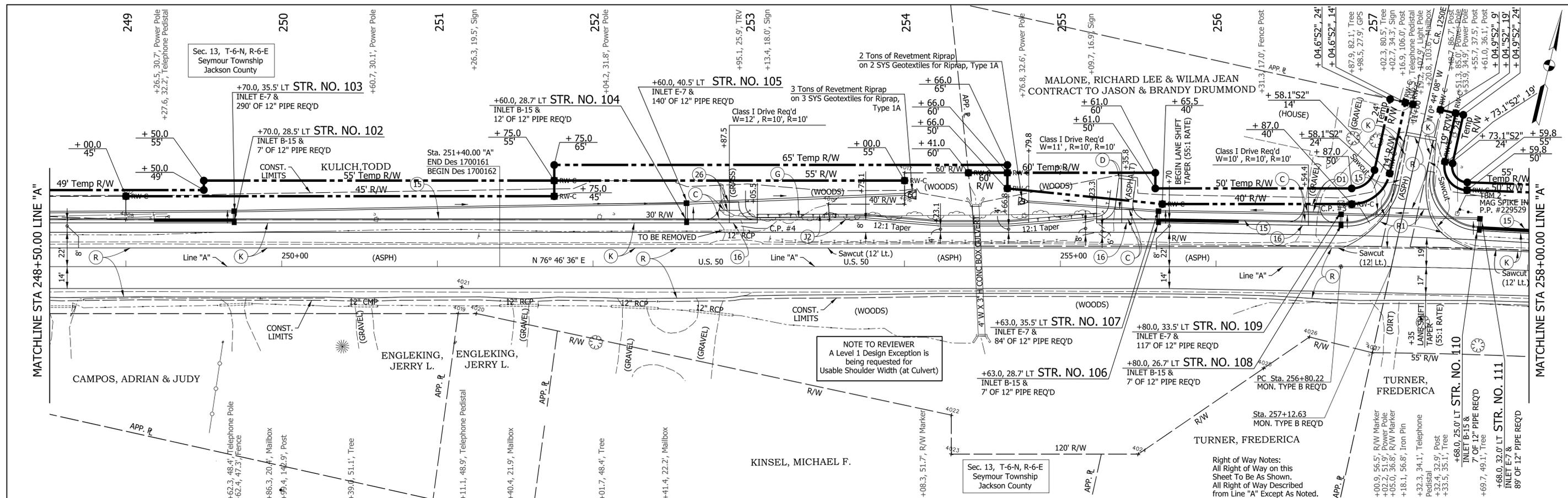
HORIZONTAL SCALE 1" = 30'	BRIDGE FILE	
VERTICAL SCALE N/A	DESIGNATION 1700161/ 1700162	
SURVEY BOOK	DWG. NO. MT-02	SHEET NO. 8 of 42
CONTRACT R-41582	PROJECT 1700161/ 1700162	

PUBLIC ROAD APPROACH, RT.
STA. 243+60.26 "A"



LEGEND (K) 165 #/SY QC/OA-HMA, 3, 70, SURFACE, 9.5 mm ON 275 #/SY QC/OA-HMA, 3, 70, INTERM., 12.5 mm ON 880 #/SY QC/OA-HMA, 3, 64, BASE, 25 mm ON SUBGRADE TREATMENT, TYPE IC (R) HMA FOR RESURFACING 165 #/SY QC/OA-HMA, 3, 70, SURFACE 9.5mm ON 1.5" MILLING, ASPHALT (G) MGS GUARDRAIL (R1) HMA FOR APPROACHES 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 1.5" MILLING, HMA (D) HMA FOR APPROACHES, TYPE B 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 6 IN. COMPACTED AGGREGATE NO. 53, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53) (C) PCCP FOR APPROACHES, 6 IN. ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53) (C1) PCCP FOR APPROACHES, 9 IN. ON DENSE GRADED SUBBASE ON GEOGRID TYPE 1B, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53) (D1) GRAVEL FOR APPROACHES 10 IN. COARSE AGGREGATE NO. 53 ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53) (16) COMBINED CONCRETE CURB AND GUTTER, TYPE B, MODIFIED (15) COMBINED CONCRETE CURB AND GUTTER, TYPE B (SLOPING) (SM) MULCH SEEDING, TYPE R (J2) COMPACTED AGGREGATE, NO. 53 (TO BE REMOVED)		RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE DESIGNED: KSC DRAWN: SDC CHECKED: SCS CHECKED: SCS	INDIANA DEPARTMENT OF TRANSPORTATION PLAN & PROFILE STA. 239+00.00 "A" TO STA. 248+50.00 "A"	<table border="1"> <tr> <td>HORIZONTAL SCALE</td> <td>BRIDGE FILE</td> </tr> <tr> <td>1" = 30'</td> <td>N/A</td> </tr> <tr> <td>VERTICAL SCALE</td> <td>DESIGNATION</td> </tr> <tr> <td>1" = 5'</td> <td>1700161/ 1700162</td> </tr> <tr> <td>SURVEY BOOK</td> <td>DWG. NO. SHEET NO.</td> </tr> <tr> <td></td> <td>PP-01 9 of 42</td> </tr> <tr> <td>CONTRACT</td> <td>PROJECT</td> </tr> <tr> <td>R-41582</td> <td>1700161/ 1700162</td> </tr> </table>	HORIZONTAL SCALE	BRIDGE FILE	1" = 30'	N/A	VERTICAL SCALE	DESIGNATION	1" = 5'	1700161/ 1700162	SURVEY BOOK	DWG. NO. SHEET NO.		PP-01 9 of 42	CONTRACT	PROJECT	R-41582	1700161/ 1700162
HORIZONTAL SCALE	BRIDGE FILE																			
1" = 30'	N/A																			
VERTICAL SCALE	DESIGNATION																			
1" = 5'	1700161/ 1700162																			
SURVEY BOOK	DWG. NO. SHEET NO.																			
	PP-01 9 of 42																			
CONTRACT	PROJECT																			
R-41582	1700161/ 1700162																			

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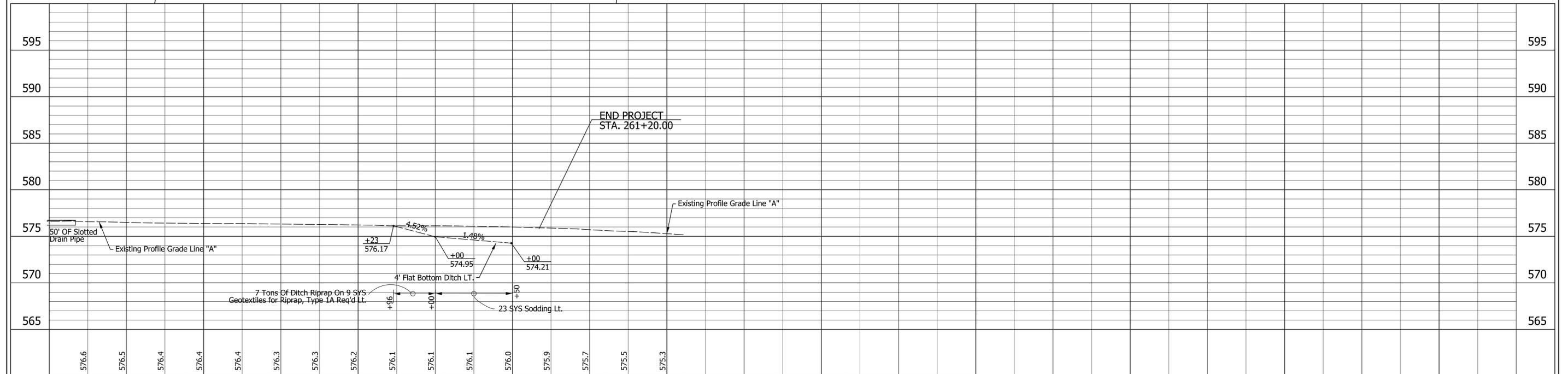
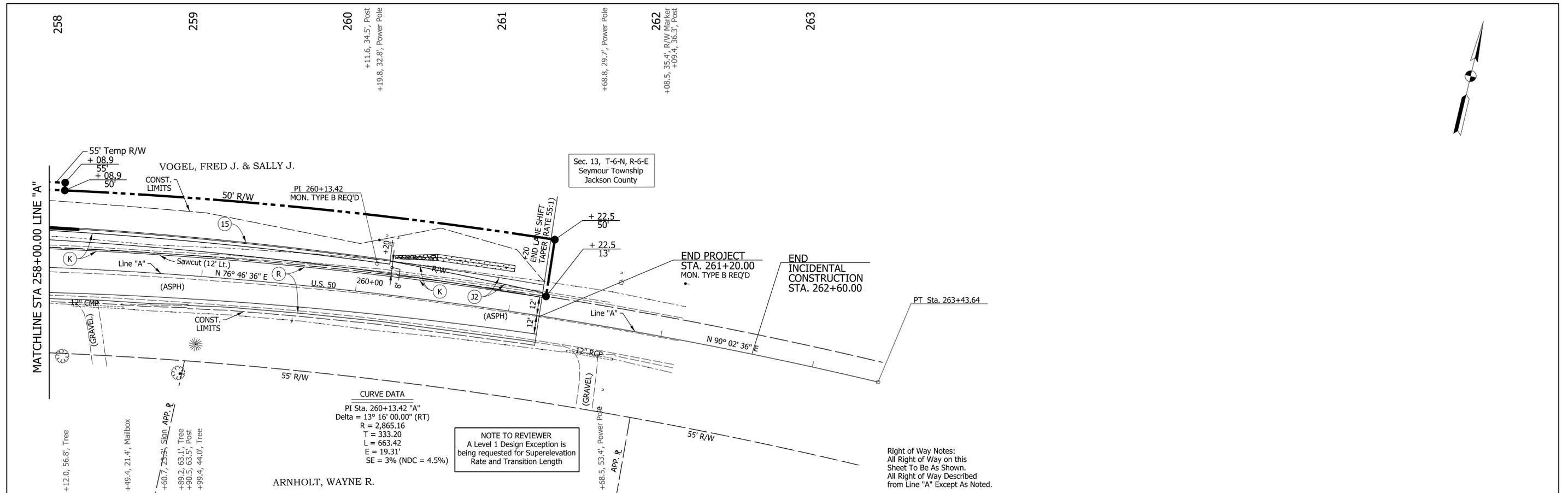
LEGEND	DESIGNED FOR APPROVAL	DRAWN	DATE	DESIGNED	CHECKED	DRAWN	CHECKED
(K) 165 #/SY QC/OA-HMA, 3, 70, SURFACE, 9.5 mm ON 275 #/SY QC/OA-HMA, 3, 70, INTERM., 12.5 mm ON 880 #/SY QC/OA-HMA, 3, 64, BASE, 25 mm ON SUBGRADE TREATMENT, TYPE IC	(R) HMA FOR RESURFACING 165 #/SY QC/OA-HMA, 3, 70, SURFACE 9.5mm ON 1.5" MILLING, ASPHALT	(G) MGS GUARDRAIL	(R1) HMA FOR APPROACHES 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 1.5" MILLING, HMA	(D) HMA FOR APPROACHES, TYPE B 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 6 IN. COMPACTED AGGREGATE NO. 53, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(C) PCCP FOR APPROACHES, 6 IN. ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(C1) PCCP FOR APPROACHES, 9 IN. ON DENSE GRADED SUBBASE ON GEOGRID TYPE 1B, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(D1) GRAVEL FOR APPROACHES 10 IN. COARSE AGGREGATE NO. 53 ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)
(R) HMA FOR RESURFACING 165 #/SY QC/OA-HMA, 3, 70, SURFACE 9.5mm ON 1.5" MILLING, ASPHALT	(G) MGS GUARDRAIL	(R1) HMA FOR APPROACHES 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 1.5" MILLING, HMA	(D) HMA FOR APPROACHES, TYPE B 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 6 IN. COMPACTED AGGREGATE NO. 53, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(C) PCCP FOR APPROACHES, 6 IN. ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(C1) PCCP FOR APPROACHES, 9 IN. ON DENSE GRADED SUBBASE ON GEOGRID TYPE 1B, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(D1) GRAVEL FOR APPROACHES 10 IN. COARSE AGGREGATE NO. 53 ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(SM) MULCH SEEDING, TYPE R
(G) MGS GUARDRAIL	(R1) HMA FOR APPROACHES 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 1.5" MILLING, HMA	(D) HMA FOR APPROACHES, TYPE B 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 6 IN. COMPACTED AGGREGATE NO. 53, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(C) PCCP FOR APPROACHES, 6 IN. ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(C1) PCCP FOR APPROACHES, 9 IN. ON DENSE GRADED SUBBASE ON GEOGRID TYPE 1B, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(D1) GRAVEL FOR APPROACHES 10 IN. COARSE AGGREGATE NO. 53 ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)	(SM) MULCH SEEDING, TYPE R	(J2) COMPACTED AGGREGATE, NO. 53

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
STA. 248+50.00 "A" TO STA. 258+00.00 "A"

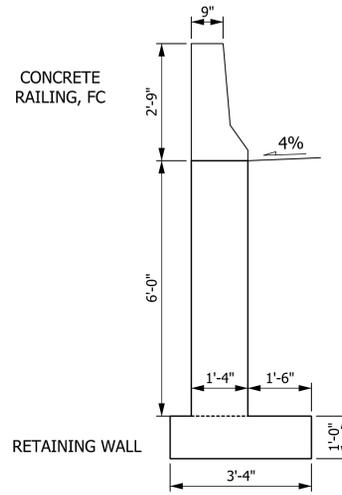
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VERTICAL SCALE 1" = 5'	DESIGNATION 1700161/ 1700162
SURVEY BOOK	DWG. NO. SHEET NO. PP-02 10 of 42
CONTRACT R-41582	PROJECT 1700161/ 1700162

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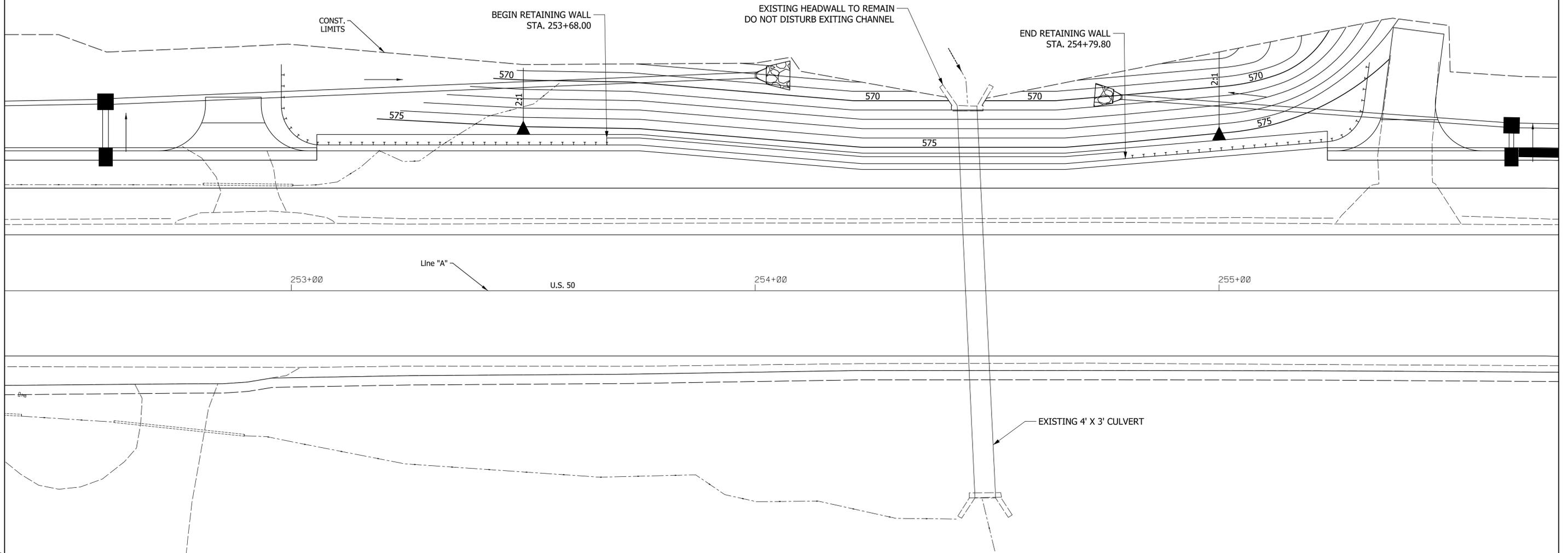
<p>LEGEND</p> <p>(K) 165 #/SY QC/OA-HMA, 3, 70, SURFACE, 9.5 mm ON 275 #/SY QC/OA-HMA, 3, 70, INTERM., 12.5 mm ON 880 #/SY QC/OA-HMA, 3, 64, BASE, 25 mm ON SUBGRADE TREATMENT, TYPE IC</p> <p>(R) HMA FOR RESURFACING 165 #/SY QC/OA-HMA, 3, 70, SURFACE 9.5mm ON 1.5" MILLING, ASPHALT</p> <p>(G) MGS GUARDRAIL</p> <p>(R1) HMA FOR APPROACHES 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 1.5" MILLING, HMA</p> <p>(D) HMA FOR APPROACHES, TYPE B 165 #/SY HMA SURFACE TYPE B ON 275 #/SY HMA INTERMEDIATE TYPE B ON 6 IN. COMPACTED AGGREGATE NO. 53, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)</p> <p>(C) PCCP FOR APPROACHES, 6 IN. ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)</p> <p>(C1) PCCP FOR APPROACHES, 9 IN. ON DENSE GRADED SUBBASE ON GEOGRID TYPE 1B, ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)</p> <p>(D1) GRAVEL FOR APPROACHES 10 IN. COARSE AGGREGATE NO. 53 ON DENSE GRADED SUBBASE ON SUBGRADE TREATMENT TYPE II (6 IN. COARSE AGGREGATE NO. 53)</p> <p>(16) COMBINED CONCRETE CURB AND GUTTER, TYPE B, MODIFIED</p> <p>(15) COMBINED CONCRETE CURB AND GUTTER, TYPE B (SLOPING)</p> <p>(SM) MULCH SEEDING, TYPE R</p> <p>(J2) COMPACTED AGGREGATE, NO. 53</p>	<p>RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____</p> <p>DESIGNED: KSC DRAWN: SDC</p> <p>CHECKED: SCCS CHECKED: SCS</p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>PLAN & PROFILE STA. 258+00.00 "A" TO STA. 263+43.64 "A"</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>HORIZONTAL SCALE 1" = 30'</td> <td>BRIDGE FILE N/A</td> </tr> <tr> <td>VERTICAL SCALE 1" = 5'</td> <td>DESIGNATION 1700161/ 1700162</td> </tr> <tr> <td>SURVEY BOOK</td> <td>DWG. NO. SHEET NO. PP-03 11 of 42</td> </tr> <tr> <td>CONTRACT R-41582</td> <td>PROJECT 1700161/ 1700162</td> </tr> </table>	HORIZONTAL SCALE 1" = 30'	BRIDGE FILE N/A	VERTICAL SCALE 1" = 5'	DESIGNATION 1700161/ 1700162	SURVEY BOOK	DWG. NO. SHEET NO. PP-03 11 of 42	CONTRACT R-41582	PROJECT 1700161/ 1700162
HORIZONTAL SCALE 1" = 30'	BRIDGE FILE N/A										
VERTICAL SCALE 1" = 5'	DESIGNATION 1700161/ 1700162										
SURVEY BOOK	DWG. NO. SHEET NO. PP-03 11 of 42										
CONTRACT R-41582	PROJECT 1700161/ 1700162										

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US 50 RETAINING WALL QUANTITIES

DESCRIPTION	TOTAL	UNITS
CONCRETE, A, SUBSTRUCTURE	33	CYS
EXCAVATION COMMON	29	CYS
CONCRETE, B, FOOTINGS	14	CYS
CONCRETE BRIDGE RAILING TRANSITION, TFC	2	EACH
RAILING, CONCRETE FC	112	LFT



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	RECOMMENDED FOR APPROVAL _____	INDIANA	
	DESIGN ENGINEER	DATE	DEPARTMENT OF TRANSPORTATION
DESIGNED: JLG	DRAWN: JLG	CULVERT GRADING DETAIL	
CHECKED: SCS	CHECKED: SCS		
		HORIZONTAL SCALE	BRIDGE FILE
		VERTICAL SCALE	DESIGNATION
		1700161/ 1700162	
		SURVEY BOOK	DWG. NO. SHEET NO.
		CONTRACT	GP-01 14 of 42
		R-41582	PROJECT
		1700161/ 1700162	